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AIR COMMAND AND STAFF COLLEGE

STUDENT REPORT

A UNIT HISTORY OF THE
315TH BOMB WING: 1944 - 1946

MAJOR RALPH L. SWANN

86-2460

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This study chronicles the activation, training, deployment, and combat operations of the 315th Bomb Wing (Very Heavy) between 1944 and 1946. It discusses the unit's success with the B-29 "Superfortress" and the APQ-7 Eagle radar while flying strategic bombing missions against Japan's oil industry. Numerous maps and photographs are included to clarify and add to the impact of the report. The report concludes by summarizing the significance of the strategic air campaign against Japan, the 315th's contribution to the strategic air campaign, and factors that may explain the Wing's success in combat.				
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PREFACE

This study is based primarily on the monthly World War II historical reports of the units comprising the 315th Bomb Wing, Very Heavy (VH). Specifically, these units were the 315th Wing Headquarters and the four bomb groups and four service groups assigned to it. This study is not intended to be a complete unit history. Instead, it summarizes the story of the 315th during World War II and highlights the dedicated efforts of the men who served it and their country with honor during that global conflict. Their heroic deeds provided the basis for this study, and many people helped to bring it to fruition.

My sponsor, Colonel George E. Harrington, USAF (Ret), provided the inspiration for this study. Col Harrington served as the 315th Wing Supply Officer during World War II and is currently the Chairman and Executive Director of the 315th Bomb Wing Association. His enthusiasm and pride in the 315th's accomplishments were infectious and sparked my interest in this project. Moreover, Col Harrington furnished key documents, photographs, and personal information to support this study.

In addition to Col Harrington's help, I was aided by several men who served as senior leaders in World War II. Major General Curtis E. LeMay was the Commander of the XXI Bomber Command from 21 January to 16 July 1945. His personal thoughts about the 315th's strategic bombardment role and combat effectiveness were extremely valuable to my study. Major General Haywood S. Hansell, Jr., the First Commander of XXI Bomber Command, provided extremely useful background information on Twentieth Air Force's strategic air campaign against Japan in World War II. Brigadier General Paul W. Tibbets, Commander of the 509th Composite Group, served with Brigadier General Frank A. Armstrong, Commander of the 315th, during the war and shared his personal recollections of Gen Armstrong's personality and leadership qualities. Furthermore, Gen Tibbets provided an invaluable analysis of the 315th's role in pioneering precision radar bombing.

I am equally indebted to many other people who helped in the preparation of this report. My project advisor, Lieutenant Colonel David McFarland, provided indispensable support and insights to direct the focus of this study. William C. Leasure, the 315th Wing Tactical Plans Officer during World War II graciously shared his expertise on the 315th's combat flight opera-

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tions and procedures. James C. Mitchell, Wesley R. Rhodenhamel, Albert F. Seeloff, and Laurence O. McCarthy represent many former 315th Wing members who furnished reminiscences, photographs, and mementos to portray the human element in the 315th's history. To all those who contributed their personal recollections I extend my sincere appreciation. Finally, my wife's unflagging patience and support contributed immeasurably to this project.

Lastly, I must accept full responsibility for the content of this study. As I completed my research, I felt myself drawn closer and closer to the events and people of the 315th, and I wanted to relate every detail to ensure each story was told. Since the scope of this project made this impossible, I tried to present a representative portion of events to tell the 315th's story. I have included a number of photographs and diagrams to illustrate the experiences of the 315th and its men. I was honored to tell their story and hope that I have succeeded in conveying the significance and fabric of their achievements to the reader.

ABOUT THE AUTHOR

Major Ralph L. Swann was commissioned in 1971 as a graduate of the AFROTC program at Bowling Green State University, Ohio. After completing pilot training at Webb AFB, Texas, he was assigned to McCoy AFB, Florida, as a KC-135 copilot. He subsequently upgraded to aircraft commander and instructor pilot at Rickenbacker AFB, Ohio. In 1977 he was a distinguished graduate of SOS. He earned a Masters of Arts degree in Business Management from Central Michigan University in 1984. His most recent assignment was as a Squadron Training Flight Instructor Pilot at Wurtsmith AFB, Michigan.

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EXECUTIVE SUMMARY

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REPORT NUMBER 86-2460

AUTHOR(S) MAJOR RALPH L. SWANN, USAF

TITLE A UNIT HISTORY OF THE 315TH BOMB WING, 1944-1946

I. Background: The 315th Bomb Wing (VH) was activated on 17 July 1944. It trained in the B-29 "Superfortress" and entered combat in the Pacific Theater of Operations (PTO) in 1945. The Wing flew 15 missions against the Japanese oil industry between 26 June and 14 August 1945. The unit was demobilized and reassigned in name only to the Fifth Air Force in May 1946.

II. Statement of the Problem: Despite adverse operating conditions, the 315th Wing successfully pioneered all-weather, precision radar bombing during World War II. Since the original demobilization of the unit, no comprehensive studies have been undertaken to document this success or the underlying individual accomplishments.

III. Objective: This report provides a historical perspective of the 315th Wing during World War II. It considers the Wing's activation, training, deployment, and combat operations in the PTO as part of Twentieth Air Force's strategic bombing campaign against Japan. It also provides a framework to identify factors contributing to the Wing's success.

IV. Conclusion: Intensive training, strong leadership, and the dedication of each man to the Wing's mission are three factors that may explain the 315th's success. These lessons are as relevant to today's Air Force as they were in World War II.

Chapter One

INTRODUCTION

Make them the biggest, gun them the
heaviest, and fly them the farthest!
General H. H. Arnold (3:5)

The B-29, struck by the intense flak, suddenly burst into flames and plummeted out of control toward the ground. The Japanese searchlights had found the B-29 hidden in the night sky, and the antiaircraft batteries quickly inflicted their mortal wound on the American heavy bomber. Captain Kenneth Dougherty,* an aircraft commander in another B-29 that night, gave his account of the incident.

At landfall there were four or five planes together. One stayed right with us all the way in. He was slightly ahead at 1 o'clock. We closed in to within a stones throw as we approached the target. In [the] area of [the] IP, searchlights, about 12 of 'em, coned him. Several guns were firing at him and after about 25 bursts, one hit 'em. Bursts were small, black ones. Just as he started to turn left in a steep bank (couldn't tell whether he was hit or taking evasive action) he burst into a sheet of flames in his midsection and he cut across us and went vertically down. We were at 16,000 feet, time 251340Z, three minutes before bombs away. He was out of control, but we did not see him explode. I don't think the ship would have held together in that much fire for very long. Those in back might have gotten out; those in front very doubtful. (41:Jul 45)

Fortunately, it was the squadron's only combat loss for the mission, but Capt Dougherty could only watch as ten comrades-in-arms fell toward earth in their flaming aircraft.

This incident occurred on 25 July 1945 over Tokyo, and the crewmen of the stricken B-29 were members of the 402nd Bomb Squadron, Very Heavy (VH), 502nd Bomb Group (VH), 315th Bomb

*The ranks given are those held by the individual at the time of the event being described.

Wing (VH). Captain Henry G. Dillingham was the aircraft commander of the ill-fated B-29 that night, and his crew's experience vividly portrays two realities of war. First, their fate is a tragic reminder of the high human costs of armed conflict. Secondly, their actions are a sobering reminder of the dedication and courage of men who have put their lives on the line in the defense of their country. The many brave men, living and dead, like Capt Dillingham and his crew must not be forgotten. To this end, this report provides a written record of the accomplishments of the 315th Bomb Wing.

This study chronicles the history of the 315th Bomb Wing during World War II. Chapter Two covers the unit's activation, training, and deployment to the Pacific Theater of Operation (PTO). Chapter Three emphasizes the combat operations of the 315th during the months it was based in the PTO. Finally, Chapter Four summarizes the significance of the strategic air campaign against Japan and the 315th's contribution to that effort. The history of the 315th Bomb Wing is closely linked to the story of the B-29 aircraft flown by the unit and to the mission of the Twentieth Air Force, the parent unit of the 315th in the PTO. A brief discussion follows to highlight these relationships.

THE AIRCRAFT

General Henry H. Arnold spearheaded the development of the B-29 aircraft. As early as 1939, Gen Arnold pursued the development of a very long-range, very heavy bomber in anticipation of future air power requirements.

Our B-29 idea came to birth in those days when it appeared that England would go down to defeat, and there'd be no place where we might base our planes for future sorties against the Axis powers. Thus a much longer ranged bomber than any we then possessed would be essential to our waging a victorious war.
(9:1)

Gen Arnold directed the engineering staff at Wright Field, Dayton, Ohio, to design a superbomber and to "make them the biggest, gun them the heaviest, and fly them the farthest!" (3:5) Several aircraft companies submitted proposals based on the specifications developed by the Wright Field engineers, but Boeing's model 345 was chosen superior. The Army Air Corps gave it the designation XB-29, and Boeing was awarded 3.6 million dollars to start prototype development. (2:3)

Unfortunately, a long series of failures during the development of the XB-29 threatened to stop plans for full-scale production. The experimental B-29 was plagued by "engine

trouble, jammed gears, dead power plants, and fires lurking in the nacelles." (3:5) Despite the numerous problems and loud outcries from critics of the XB-29 program, Gen Arnold remained steadfast about continued development and full-scale production. In fact, "the bold decision to order mass production of B-29s had been made by Gen Arnold some 16 months before the first test flight, and when that flight was made, 1664 B-29s were already on order." (14:335) Gen Arnold's persistence paid off on 27 June 1943 when Colonel Leonard "Jake" Harmon successfully flew the second experimental B-29 at Boeing's plant in Wichita, Kansas. Attention then turned to the overwhelming problems of full-scale production.

The Army Air Force and America's aircraft companies cooperated to mass produce the most advanced bomber of World War II. Gen Arnold's challenge to mass produce the B-29 was spurred by President Roosevelt at the Quebec Conference in the fall of 1943. At that conference President Roosevelt pledged 200 B-29s for combat use in Asia by 1 March 1944. (3:5) It was a staggering promise, but America's aircraft companies worked around-the-clock and met the deadline. Gen Arnold's and the Army Air Force's \$3 billion gamble on the B-29 had paid off.

It was the most complex plane ever conceived--60 tons of fighting fury. . . four 2,200-horsepower engines. . . 20,000-pound bomb capacity. . . 137,000-pound maximum overall weight with bombs and gasoline. . . an instrument panel like a mad-man's dream. . . 50,000 separate parts. . . one million rivets. . . thousands of miles of complex wiring. . . 141 feet wing span. . . 99 feet long. . . 27 feet high. . . capable of flying a 16-hour mission. . . dwarfing the B-17 Flying Fortress--all in all, the biggest, fastest, most powerful bomber in the world. (6:199) (Appendix 1)

The aircraft that many had written off as a lost cause was finally rolling off the assembly line.

More than the biggest and fastest, the awesome B-29 incorporated many of the latest technological improvements. It was equipped with the newest radar, the APQ-13, and a system of remotely controlled automatic gun turrets known as the central fire-control system (CFC). The CFC had five sighting stations throughout the aircraft which controlled five gun turrets. Four turrets had twin 50-caliber guns while the upper forward turret had four 50-caliber guns. A high-efficiency wing and wing flap system developed by Boeing were also installed, thereby keeping B-29 takeoff and landing ground runs comparable to those for B-17s and B-24s. (22:4) Its four powerful "2,200 hp, 18 cylinder Wright Cyclone engines with dual sets of turbo-superchargers had four-bladed propellers so large they must be slowed down by

35/100 reduction gears to keep the tip speed under the speed of sound." (22:4) Finally, the B-29 had a cabin pressurization system designed to maintain a cabin pressure of 8,000 feet for the crew while flying at 30,000 feet. America's first very heavy bomber, the B-29 Superfortress, was ready for aircrews to test it in training and in the special mission that awaited it.

THE MISSION

The creation of the B-29 forced changes in the American military command and control structure in 1944. Many military leaders, including Gen Arnold, recognized the potential power of the B-29 in a concentrated strategic bombardment campaign against Japan. They also realized the B-29 strategic air forces would require a continuity of employment if they were to accomplish their strategic mission. However, "under prevailing doctrines of unity of command, air units were assigned to a theater commander working under broad directives from the Joint or Combined Chiefs of Staff." (5:34) This meant strategic forces could be diverted to support theater operations at the discretion of the theater commander.

On 10 April 1944, the Joint Chiefs of Staff (JCS) addressed this conflict by adopting a radical new plan to ensure a unified and concentrated strategic bombing effort against Japan. According to the plan, a new strategic air force was created and would remain under the centralized control of the JCS with a single commander, Gen Arnold, acting as their agent to direct worldwide strategic bombing operations. This new strategic air force was designated the Twentieth Air Force. Thus, on 12 April 1944, the Twentieth Air Force became the first unit to be activated with B-29s and operationally controlled by the JCS. (20:6)

Additionally, the JCS established the strategic mission and force composition of the Twentieth Air Force. Its mission reflected the potential strategic power of a concentrated B-29 bombing campaign against Japan.

The primary mission of the Twentieth AF, the first very heavy bombardment organization committed to combat, was to achieve the earliest possible dislocation of the Japanese military, industrial, and economic systems and to undermine the morale of the Japanese people to a point where their capacity to wage war was decisively weakened. (10:2)

To accomplish its mission, the Twentieth Air Force was authorized a striking force of a thousand B-29s. This powerful

force was assigned to two bomber commands--XX Bomber Command and XXI Bomber Command. The XXI Bomber Command was directed to operate out of the Marianas Islands in the Pacific with five very heavy bombardment (VHB) wings assigned to it. The 315th Bomb Wing was one of these VHB units.

FUNCTIONAL ORGANIZATION CHART

JULY 1944

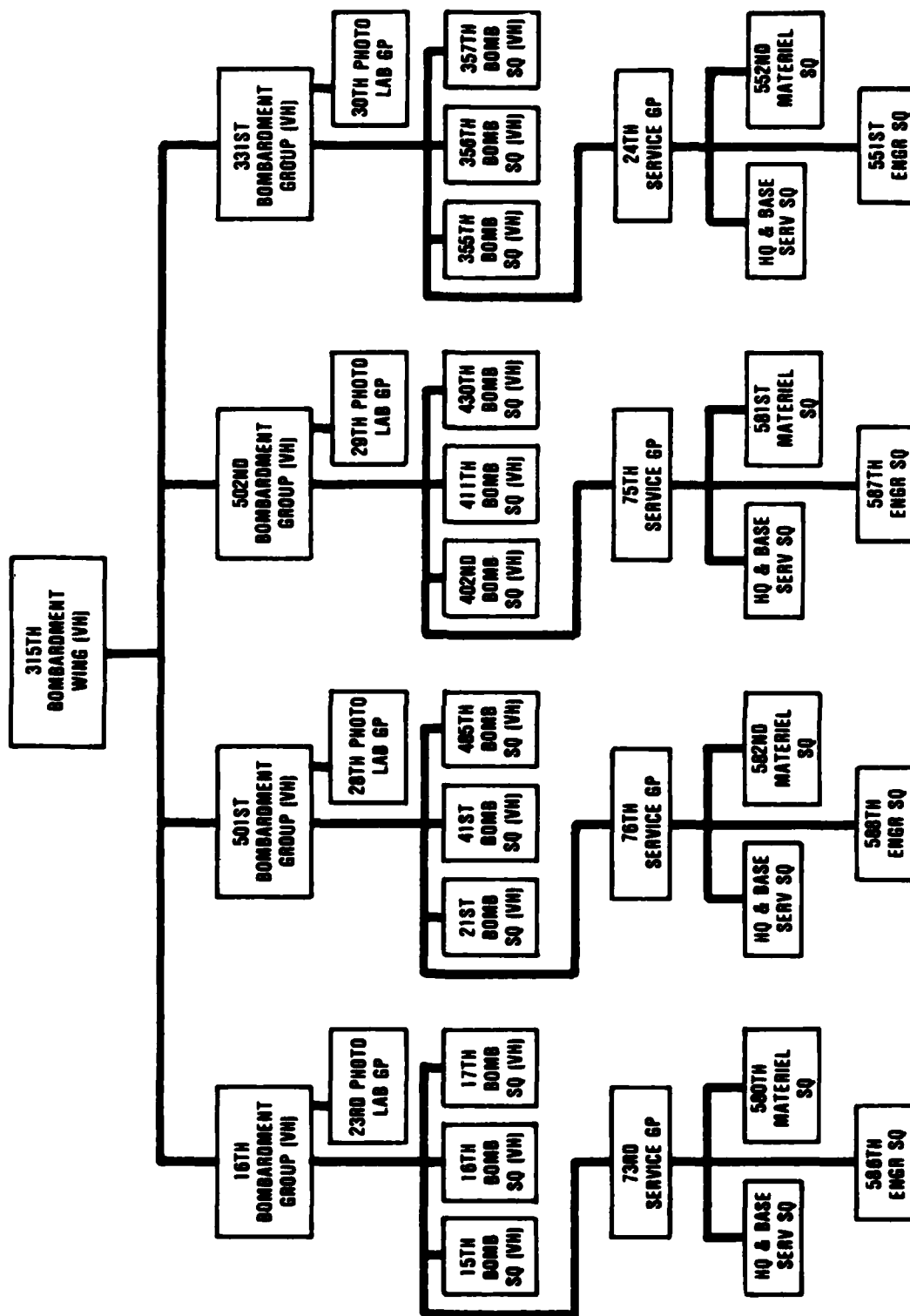


Figure 1

Chapter Two

ACTIVATION, TRAINING, AND DEPLOYMENT

I expect to have the best damned Wing
that ever goes out of the country, and
I expect to bring it back.

General Frank Armstrong (38:Nov 44)

ACTIVATION

The 315th Bomb Wing (VH), activated on 17 July 1944 and headquartered at Peterson Field, Colorado Springs, Colorado, was a complex and widespread organization. (Appendix 2) The combat arm of the wing was composed of four very heavy bomb groups (BG), the 16th, 331st, 501st, and 502nd, stationed at Dalhart Field, Dalhart, Texas. (13:423) (Fig. 1) Each bomb group was composed of three very heavy bomb squadrons. The 15th, 16th, and 17th joined the 16th BG (VH); the 355th, 356th, and 357th joined the 331st BG (VH); the 21st, 41st, and 485th joined the 501st BG (VH); and the 402nd, 411th, and 430th joined the 502nd BG (VH). In addition, four photographic squadrons were activated, the 23rd, 28th, 29th, and 30th, with one assigned to each bomb group. To support the combat groups, four service groups were activated in May 1944. These units, the 24th, 73rd, 75th, and 76th, were initially based at Fresno, California, and Warner Robins, Georgia, and would be mated with the rest of the wing's units overseas. (Fig. 2)

TRAINING

During the combat training period, the 315th Bomb Wing Headquarters did not directly command its newly designated subordinate units. Instead, the 315th Wing Headquarters and its four bomb groups were placed under the control of Second Air Force.

The Second Air Force, because of its enviable position as a pioneer in heavy bombardment training. . . and available training facilities, was the logical selection by the War Department for the manning and training of all such Very Heavy units in preparation for duty in the combat areas. (38:Jul 44)

STATESIDE BASING

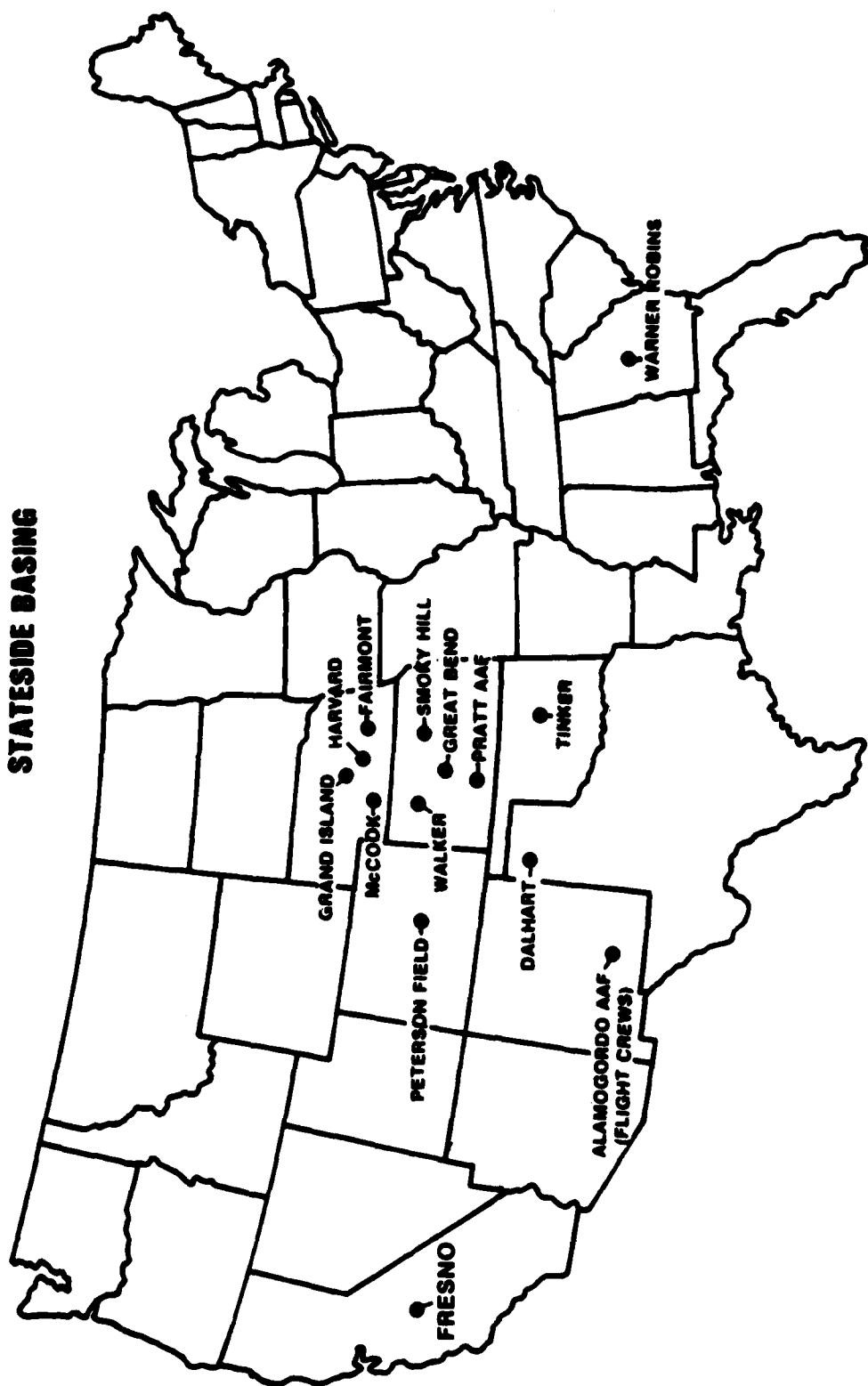


Figure 2

Subsequently, the four bomb groups were attached to the Second Air Force's 17th Bombardment Training Wing for all necessary training and administration. As a result, the 315th Wing Headquarters maintained only a supervisory role over the bomb groups. Similarly, the four service groups completed their entire training under the jurisdiction of the Army Air Force's Air Service Command headquartered at Patterson Field, Ohio. Since their training program was independent of the 315th Bomb Wing Headquarters and bomb groups, the service groups will be described separately later in this chapter.

The manning of the new 315th units to authorized strength was a gradual and continuous process. Initially, most units were hardly more than skeletal organizations. On the date of activation, the 315th's Wing Headquarters had a total of one officer, First Lieutenant Philip Locke, and two enlisted men assigned. (Fig. 3) Lieutenant Colonel Robert A. Koerper arrived on 28 July and assumed command of the 315th until replaced by Lieutenant Colonel Stanley A. Zidiales on 11 August. By the end of July 1944, the 502nd Bomb Group's strength table showed only 10.7 percent of the authorized officers and 4.2 percent of the authorized enlisted personnel actually on station at Dalhart Field. Such gradual personnel increases were common throughout the 315th, and, like the 331st Bomb Group, each unit adapted to its temporary manpower problem.

The handful of officers present for duty were of varied classifications, but took temporary duty assignments or many of the administrative and organizational duties and carried them out in a very commendable manner. The enlisted men as well as officers worked in a truly soldierly manner and showed very profound interest in helping with the Group organization. Airplane technicians substituted as clerks, truck drivers as supply men, and so on throughout the Group. (39:Jul 44)

As more and more men reported for duty, small classification boards were started to interview each newcomer to determine how his military occupational specialty (MOS), experience, and grade level could best be used in the unit. This process continued until each unit reached full strength.

Facilities, equipment, and supplies were equally limited during the early months following activation. Basic equipment such as picks and shovels was severely restricted. There were only a limited number of buildings for offices and classrooms. The lack of training manuals and 16mm film projectors hampered classroom training. Office and quartermaster supplies such as desks, typewriters, manila folders, soap, brushes, and brooms were scarce. In July, the 501st Bomb Group reported that at one point the lack of toilet paper almost became a major consideration for the unit. In a group staff conference, Lieutenant



Figure 3

Lt Philip Locke with TSgt Gay (left) and
Sgt Dutton (right) at Peterson Field,
Colorado, 17 July 1944.

Colonel Arch Campbell, the 501st Group Commander, stated, "however good the intentions of the Quartermaster, we still couldn't use requisitions in place of toilet paper."

(40:Jul 44) In response to repeated failed attempts to obtain supplies through normal channels, some units resorted to unorthodox methods to secure needed materials. The 16th Bomb Group successfully arranged air transportation to fly in needed administrative materials from other bases where certain of its current ranking officers had previously been assigned. Thus, each 315th unit faced numerous environmental limitations as it started training operations.

Despite these initial problems, classification of personnel for training programs began immediately throughout the 315th. The location and type of training depended on each man's MOS and classification as either flight, air, or ground echelon personnel. Aircrews comprised the flight echelon. The group commander determined personnel classification as either air or ground echelon based on the final duty assignment of personnel at the time of their embarkation for overseas combat duty. The air echelon consisted of the bare minimum personnel who would deploy overseas by aircraft. All other personnel would deploy via surface transportation and were classified as the ground echelon. Once classified, personnel started their respective training programs, and some men were sent to schools throughout the United States.

There were five major training programs. Each program was independent of the other, and some personnel completed more than one. The five major programs were:

1. Initial B-29 Flight Crew Training School at Alamogordo, New Mexico.
2. Air echelon (Group Cadre) schooling at the Army Air Force School of Applied Tactics (AAFSAT) in Orlando, Florida.
3. Three-part ground echelon training conducted at each VHB unit.
4. Training for officers and enlisted men at specialized schools throughout the country.
5. Bivouac training conducted by each VHB unit.
(41:Sep 44)

Most of these programs and schools operated continuously to satisfy the training requirements of B-29 units steadily increasing in strength. Thus, 315th personnel were scheduled

to complete these programs at various times throughout the pre-deployment training period.

The B-29 flight crews trained at Alamogordo, New Mexico. (Fig. 2) Flight crews were sent to the 231st Combat Crew Training School (CCTS) at Alamogordo Army Air Field (AAF) to complete 3 months of flight and technical training. The Second Air Force's Flight Training Directive for Combat Crews: B-29, dated 14 March 1944, specified the flight training program.

This flight training program is based on the principles and training program time per month that are shown to be available in the introduction to the Technical Training program. This allows during each month 25 hours for briefing and stations, 15 hours of interrogation, and 85 hours of flying time to accomplish 65 hours of training missions. Training missions totaling 65 hours will be accomplished each month within the 125 hours set aside for their accomplishment. (26:3)

In addition, Second Air Force's Technical Training Manual for Combat Crews: B-29, dated 5 March 1944, directed each crew member to complete 75 academic hours of technical training in his primary and secondary crew duties. (28:6) The B-29 flight crew trainees were also sent to Lincoln Army Air Field, Lincoln, Nebraska, to complete a special altitude training program with instruction on explosive decompression and an altitude chamber flight. After completing training, the crews were assigned to a 315th bomb group for advanced flight training and joined the ground and air echelons already assigned to that group.

A selected number of air echelon personnel were sent to the Army Air Force School of Applied Tactics (AAFSAT) in Orlando, Florida. Both officers and enlisted men from the bomb group headquarters and bomb squadrons attended the two-phase, four-week AAFSAT course for indoctrination into very heavy bombardment operations. The first phase consisted of two weeks of orientation and academics. Courses for officers included operational and navigational weather, radar, group intelligence functions, briefing and interrogation, mine-laying procedures, and bombardment. Courses for enlisted personnel included camouflage, armament, mapping, safeguarding military information, radio, supply, engineering, and gunnery. The second phase was also two weeks long and allowed the students to put into practice what they had learned in the classroom. This phase was completed at nearby Pinecastle AAF, where flight operations simulating combat conditions were conducted. "Between the two phases of AAFSAT, the Group Cadre was thus able to make a start on the problem of the Very Heavy Operations." (41:Sep 44)

The Second Air Force's Ground Echelon Training Program for all Ground Personnel of Very Heavy Bombardment Operational

Training Units, dated 24 June 1944, outlined the training program for ground echelon personnel. (27:1) This directive specified three categories of training. The first, Basic Technical Training, applied to all ground personnel and listed the minimum requirements to be accomplished in preparation for overseas movement (POM). Training courses included Army orientation, bomb reconnaissance and dispersal, chemical warfare, gunnery, and camouflage. The second, Technical Training for Special Sections, prescribed training requirements for personnel in the unit ordnance, photographic, armament, and communication sections. The third and final category covered On-the-Job Training (OJT) for special sections such as supply, engineering, and communications maintenance. Ground echelon training in each of these categories continued throughout the predeployment period to train newly assigned personnel and to maintain the proficiency of previously trained personnel.

Selected ground and air echelon personnel were also assigned temporary duty to attend specialized training schools. The B-29's aircraft systems incorporated many of the latest technological improvements and required specialized personnel training to operate and repair them. Thus, along with full scale development of the B-29, specialized schools had been set up around the country to provide courses of instruction for personnel in the new very heavy bombardment units. Five of these schools were:

1. The B-29 Factory Airframe Course, Boeing Aircraft Corporation, Seattle, Washington.
2. The R-3350 Engine Course, Amarillo, Texas.
3. The Fluxgate Compass Course, Air Position Indicator Course, 3502nd AAF, Base Unit, Chanute Field, Illinois.
4. The Turbo-Supercharger Course, 3526th AAF, Base Unit, Lincoln School, West Lynn, Massachusetts.
5. The C-1, Automatic Pilot Course, Minneapolis Honeywell Regulators Company, Minneapolis, Minnesota.
(41:Sep 44)

Graduates of these schools returned to their units to apply and share their new technical knowledge and skills. (Appendix 3)

During August and September 1944, the 315th's four bomb groups conducted their first bivouac training at Yankee Canyon near Raton, New Mexico. For five days, air and ground echelon personnel lived and operated under simulated wartime field conditions as specified in Second Air Force's Unit Bivouac Training Manual, dated 5 January 1944. (29:--)

During the

bivouac, group personnel received training in camouflage, chemical warfare, close order drill, bomb dispersal, field sanitation, malaria control, mapping, infiltration techniques, gunnery, and defense against air attack. (Fig. 4-7) Members of the 16th Bomb Group vividly remembered what all the men of the 315th experienced during bivouac training.

We had to toughen up, the book said in large print. And Raton, NM is where the toughening up process took place. Toward the end of August we moved out to the bivouac area in Raton--a squadron at a time. We met the engineers (a little careless with their dynamite but otherwise O.K.) and we almost met every insect, snake, and lizard in the state of New Mexico. For diversion we ducked live slugs on the infiltration course, walked through gas just to prove that our masks worked, and hiked around (but NOT to look at the scenery). The last night was a real thriller-diller. Until dark we made faces at each other from either side of a gully. Then somebody fired a flare and we mixed it up a bit. At midnight somebody called off the war but a few carried on a personal war until late in the morning. Dalhart looked just a little better after Raton. (32:Aug 44)

Bivouac training was conducted periodically throughout the pre-deployment period to insure all new personnel completed the training.

During August and September, ground echelons of the 16th, 501st, and 502nd Bomb Groups left Dalhart Field for operational training bases in Nebraska. The 16th was assigned to Fairmont AAF, Geneva, Nebraska, and the ground echelon arrived there on 15 August. (Fig. 2) The 501st arrived at Harvard AAF, Harvard, Nebraska, on 22 August. The 502nd reached its new home at Grand Island AAF, Grand Island, Nebraska, on 26 September. The ground echelons paved the way for the arrival of their air echelons still on detached service at AAFSAT in Orlando, Florida. The bomb groups soon discovered their newly assigned bases were also occupied by other bomb groups still completing their final phase of predeployment training. The 16th, 501st, and 502nd overlapped with the 504th, 505th, and 6th Bomb Groups (VH), respectively. This unit overlap had mixed effects.

The unit overlap benefited both tenant bomb groups at each base. For the 315th's bomb groups, all personnel immediately began to absorb the practical experiences of their more experienced counterparts. The accelerated training of 315th personnel was particularly evident in maintenance. Sergeant Edward H. Hering, an armament crew chief in the 501st Bomb Group at Harvard AAF, stated, "I learned more about the B-29 working with the crews of the 505th Bomb Group than I did in any technical school." (44:1) By October the combined maintenance performance



Figure 4

Men arrive at Raton, New Mexico, for bivouac training.



Figure 5

Gas attack during the march to camp.



Figure 6
Practicing infiltra-
tion techniques.



Figure 7
Oh well! The chow's good.

of the 502nd and 6th Bomb Groups at Grand Island AAF was so exemplary, the Commanding General of Second Air Force commended all personnel for their achievement in the number of hours flown per aircraft. Their success was largely due to a new method of completing aircraft preflight inspections following flight instead of just prior to flight. This technique significantly improved the rate of aircraft able to meet the flying schedule, and the first eight-plane formation of B-29s was launched on 22 October. Finally, when the 504th, 505th, and 6th Bomb Groups' ground echelons prepared to deploy overseas in advance of their air and flight echelons, the 315th's ground echelons easily assumed their duties to facilitate their departure. Thus, the unit overlap accelerated the training of 315th personnel and prepared them to provide operational support to the departing groups' air and flight echelons.

On the other hand, the unit overlap severely strained the limited resources at the Nebraska bases. Office, transportation, mess hall, post exchange, and housing facilities designed to handle one bomb group had to stretch to meet the needs of two. Consequently, overcrowding was commonplace. The housing shortage was particularly critical with little relief provided by the small communities surrounding the bases. Pyramidal tents sprang up at each base to provide temporary housing for the men of the 16th, 501st, and 502nd Bomb Groups. For the 501st at Harvard Field, the area where the six-man pyramidal tents were set up was promptly nicknamed "Tent City." (Fig. 8) As more and more tents sprang up, the men began to make improvements to their new housing area, and Tent City developed a character all its own.

The 'naming' of their tents became somewhat of a major christening what with all the tent-dwellers openly contesting with their neighbors with newly painted signs ranging from 'Commanding General' to 'Esquire Club'; 'Club Rendezvous'; . . . and other similar names. Each tent-group tried its best to install new innovations varying from painted interior and exterior woodwork to new electrical installations. Anything to outdo his next-door neighbors' tent for originality became the vogue. (40:Sep 44)

The problems of overcrowding continued until the 504th, 505th, and 6th Bomb Groups deployed overseas.

Actions to maintain and improve morale in the 315th continued throughout the training period. Unit special services sections provided day rooms equipped with pool tables, ping pong tables, radios, magazines, books, writing materials, card tables, and coke machines. Sports leagues were started in softball, volleyball, basketball, and bowling. (Fig. 9) Movies were shown weekly at most units. Newspapers were started by some



Figure 8
 "Tent City," Harvard AAF, September 1944.

units like the 331st Bomb Group--still based at Dalhart--which first printed The Target on 25 August. Dances were held regularly, and on holidays, with local girls, nurses, and USO girls invited to attend. (Fig. 10)

Fenolli boppers from Brooklyn, toddlers from Massachusetts, hop-cats, clucks, and jitter-bugs from everywhere jammed the floor of the Base Gym in wicked rug cutting last eve to make the initial dance of the 331st Bomb Group a success. There was plenty of food for wolfish GIs and partners, and drinks (soft) too. But what pleased the EMs most were the Dalhart fluffs and WACs who braved mud and rain to make the evening memorable. During intermission, 'Tick' Jones brought down the house with his tap-dancing. Miss Mary L. Barnes, hostess at the Colored Service Club, charmed the audience with sweet singing, while SSgt Joseph P. Griffin moved them with Ink Spots. The men of the 331st look forward to future dances of which there will be many. (39:Aug 44)

There were also special events such as the 16th Bomb Group's trip on 7 October to Lincoln, Nebraska, to attend the football game between the Second Air Force "Superbombers" and the Iowa Naval Preflight School. Finally, off-base activities such as



Figure 9
Physical fitness and relaxation.



Figure 10
Dancing at Dalhart AAF, Texas, August 1944.

the local USO, Veterans of Foreign Wars Clubs, theaters, shopping facilities, dance halls, and high school sports events complemented on-base activities to support morale.

A singularly important morale factor in the 315th Wing was the personal pride in being a member of a B-29 Superfortress outfit. The Army Air Force and the news media had repeatedly heralded the final development of the new, powerful B-29 and associated very heavy bomber units. The men of the 315th knew they were part of a Superfortress outfit--a new, elite flying organization. This knowledge gave each man an inner pride and sense of importance in the war effort.

Routine unit activities and a tragic event characterized 315th operations in October. The 331st and 501st Bomb Groups held their second bivouac training exercises. The 331st also sent an advanced ground echelon to McCook AAF, McCook, Nebraska, to prepare for its upcoming move there in November. Colonel Kenneth O. Sanborn assumed command of the 502nd Bomb Group on 6 October. Major George Harrington and Captain Nathaniel Grimm, from the 315th Headquarters staff, visited the 501st at Harvard Field to assist that unit in winterizing some 185 tents in Tent City. Clothing shakedowns were held in each unit to determine needs for the coming winter months. Medical and dental examinations continued at a hectic pace as new personnel joined their units. Halloween dances were held at the end of the month to maintain morale. Unfortunately, the month's positive gains were somewhat marred by the loss of Captain Edward M. Woddrop, Assistant Operations Officer of the 17th Bomb Squadron, who was killed in an aircraft ground mishap at Fort Worth, Texas, on 11 October.

In November, a combat veteran named Brigadier General Frank A. Armstrong was selected to command the 315th Bomb Wing. (Fig. 11) He had served as a combat group and wing commander in Europe until August 1943. During his assignment as Commander of the 97th Bomb Group, Gen Armstrong earned a reputation as a tough and demanding officer. Major Paul W. Tibbets, appointed by Gen Armstrong to be the 97th's Executive Officer, witnessed Gen Armstrong's leadership style.

As a commander, Frank Armstrong was a leader not a 'driver,' but he demanded compliance and performance. He knew what had to be done; how to do it; and made it abundantly clear what he expected of everyone. Frank was not afraid of responsibility and when warranted he took the blame for mistakes rather than remain silent and let subordinates take the brunt. Frank never asked anyone to do anything he himself would not do. . . . Frank Armstrong was a man's man and looked up to by those working with him to attain the objectives but feared by those who shirked their duty. (52:3)



Figure 11
Brig Gen Frank A. Armstrong.

Gen Armstrong* left the 97th to command the 306th Bomb Group and promptly turned that troubled unit into an effective combat force. After his return to the United States, Gen Armstrong joined the Second Air Force and subsequently commanded both the 46th Bombardment Training Wing, Dalhart Field, Texas, and the 17th Bombardment Training Wing, Grand Island AAF, Nebraska. Gen Armstrong departed the latter assignment to command the 315th.

On 18 November 1944, Gen Armstrong assumed command of the 315th Bomb Wing (VH). He promptly held a briefing and outlined his command philosophy to his wing staff and group commanders.

I don't contemplate any wrangling between the Group Commanders, their staff, or the 315th staff. We are from this day on, one big family. I hope it will be a happy family. We have only one purpose in mind, and that is to train the four Groups of the 315th, and needless to say I don't have to elaborate on training, because when the 315th goes out I expect and demand that it go out the best trained Wing in the B-29 program. . . . I expect to have the best damned Wing that ever goes out of the country, and I expect to bring it back. What more can I tell you? (38:Nov 44)

Gen Armstrong's commitment and reputation as an effective combat commander fueled a sense of purpose and cohesiveness throughout the 315th.

November 1944 was a month of consolidation and planning for the 315th. The 331st Bomb Group moved to McCook AAF on 11 and 21 November to complete the transfer of all 315th bomb groups to their predeployment training bases in Nebraska. Of course, the 331st experienced the same unit overlap situation as its sister bomb groups had earlier. Meanwhile, the 501st took sole control of Harvard Field and promptly moved the men from Tent City to permanent barracks. Sixty-two flight crews were assigned to the 315th following their completion of B-29 training at Alamogordo, New Mexico. Each of the bomb groups received 15 or 16 of the new flight crews as the initial allotment toward their authorized strength of 50 crews. The 315th Wing Headquarters also initiated tentative planning for the wing to conduct simulated combat training flights in the Caribbean. By the end of the month, the bomb groups were finalizing training plans to start flying operations in December.

The 315th enthusiastically supported two American traditions in November. The 6th War Bond Drive was in full swing throughout the month, and personnel had the opportunity to contribute on payday. At the 501st, one NCO in each barracks was designated as War Bond representative to encourage purchases. Officers

*The fictional character Frank Savage in the popular movie Twelve O'Clock High was based on the real-life experiences of General Armstrong in the European theater.

in the 501st were also encouraged to purchase "at least one \$18.75 bond over and above allotments." (40:Nov 44) On 30 November, each unit held its own Thanksgiving celebration, and the men and their families gathered together in the mess halls for turkey dinners with all the trimmings. Entertainment was also provided throughout the day. At the 502nd, Frankie Masters and his band played in one of the hangars during the afternoon and later in the evening for the officers' dance. The War Bond drive and the Thanksgiving Day celebrations were highly successful.

On 7 December, the 315th Wing and its four bomb groups received their colors and standards. Major General Robert B. Williams, the Commanding General of Second Air Force, made the presentations at a ceremony held at Peterson Field, Colorado. Gen Frank Armstrong received the colors for the wing while Colonels Hoyt Prindle, Samuel Gurney, Kenneth Sanborn, and Boyd Hubbard accepted the colors for the 16th, 331st, 501st, and 502nd Bomb Groups, respectively. (Fig. 12) This ceremony, held on the third anniversary of the Pearl Harbor attack, symbolically marked the beginning of the 315th Wing as a distinct combat entity.

Bomb group flight operations began in December. Aircrew ground and flight training schedules were completed and published. (Appendix 4) The flight crews who had arrived in November were assigned to one of three squadrons in each bomb group. Each squadron was divided into three flights and while one flew, the other two completed ground training. As specified for the first phase, initial flight training for the B-29 crews was limited to local transition missions. These included routine take-offs and landings, short cross-country flights, and emergency procedures practice. The flight training was also completed in the B-17 aircraft still assigned to the bomb groups pending delivery of additional B-29s. Unfortunately, the month's flight training was hampered by the severe Nebraska winter.

D. H. McGillicudhay joined the 356th Bomb Squadron, 331st Bomb Group in December--or did he? The 356th consisted of three flights: A, B, and C, with A and B each having six crews assigned while C had only five. The crews were designated 6A1 through 6A6, 6B1 through 6B6, and 6C1 through 6C5. The crews in C flight resented being shorted a crew and agreed to create D. H. McGillicudhay as the sole member of crew 6C6. D. H. McGillicudhay "officially" joined the 356th when the crews started ground school at McCook AAF in December. As the crews enrolled in each class, the instructor called roll call for crews 6C1 through 6C5, then asked if there were any crews missing. The crews chimed in saying, "Yes, McGillicudhay, 6C6," and he was duly enrolled in each class. (11:317) Some months later, crew 6C4 was flying a training mission over St. Cloud, Minnesota, and saw another B-29 headed the other way. They

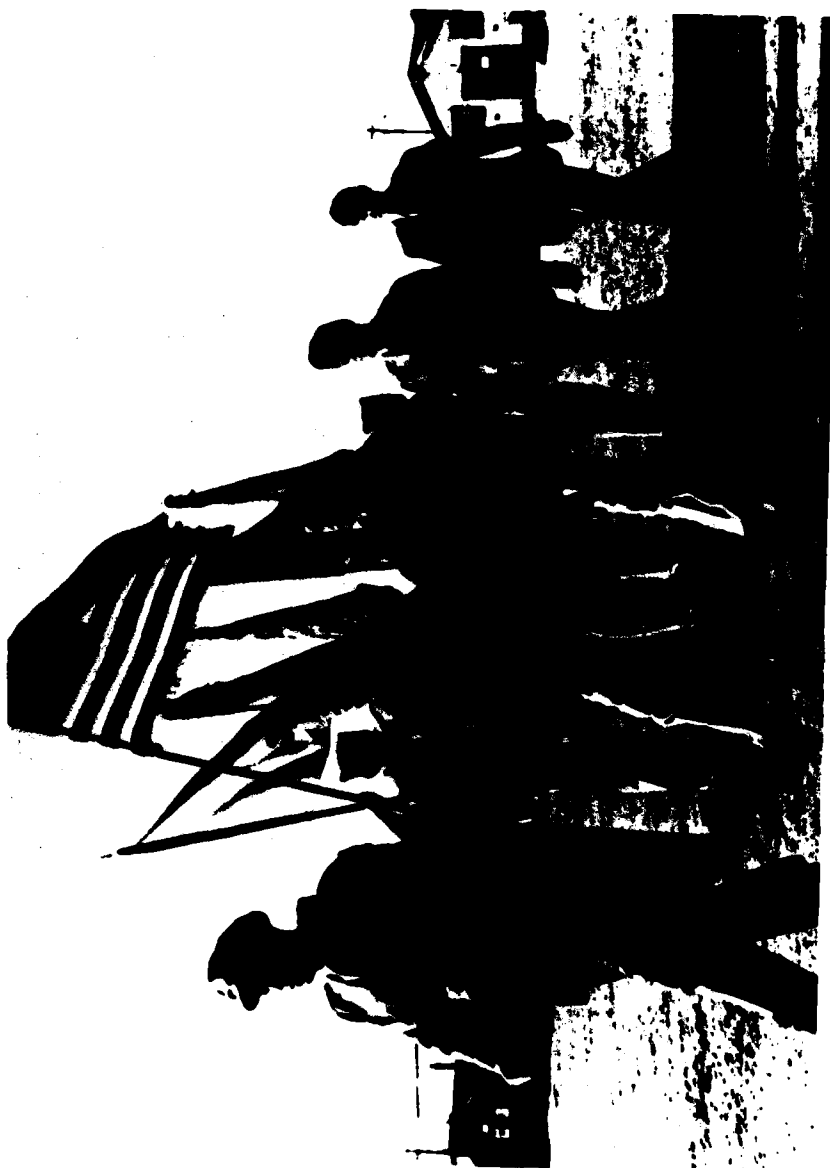


Figure 12

Gen Frank Armstrong and Colonels Hoyt Prindle, Samuel Gurney, Kenneth Sanborn, and Boyd Hubbard march front and center to receive their organizational colors.

radioed the other aircraft for identification and received the reply, "D. H. McGillicudhay, crew 6C6." (11:317) Thereafter, D. H. McGillicudhay became a major contributor to the morale of the 356th.

The 315th Wing Headquarter's flight personnel also began B-29 flight training in December. They had been unable to fly until December because no B-29s were available to the wing headquarters at Peterson Field. However, on 18 December, the Second Air Force assigned the newly activated 509th Composite Group to the 315th. Subsequently, the 315th borrowed a B-29 from the 509th, and the wing's flight personnel immediately began transition flying to parallel the bomb groups' flight training activity.

The assignment of the 509th Composite Group to the 315th raised many questions. The 509th was based at Wendover Army Air Field, Utah, and commanded by Lieutenant Colonel Paul Tibbets, Gen Armstrong's former Executive Officer at the 97th in Europe. The 315th became the 509th's parent unit due to a request by Lt Col Tibbets.

At the time of my assignment to organize and train a unit capable of delivering atomic weapons, I was assigned to a B-29 instructor training school at Grand Island, Nebraska. Frank Armstrong was the [17th Bombardment Training Wing] Commanding General. This was September 1944. When Frank got the 315th Wing, I asked Second Air Force to assign the 509th to his Wing for the obvious reasons, i.e., our past relationships and the fact that the 509th, once outside the U.S., would have to be attached to some organization. (52:1)

Although the 509th became part of Gen Armstrong's command structure, he did not know the highly secret mission the 509th was training to accomplish. The guarded secrecy also prevented Gen Armstrong and his staff from discovering the 509th's mission or interfering with its operations. As a result, the 315th wing staff wondered what affect the 509th would have on the wing's overseas deployment date and future combat operations.

A special project known as the "Gypsy Task Force" was inaugurated in December and affected the 315th's future training operations. In the late fall of 1944, the Second Air Force was concerned about the dramatic decline in flying training time logged at the VHB bases in Nebraska and Kansas due to adverse weather. In response to this situation, Colonel William A. Miller, Commanding Officer of Grand Island AAF, proposed setting up training bases in the Caribbean area to train VHB flight crews. In December, Second Air Force permitted Col Miller to conduct a two-week test of the idea at Borinquen Field, Puerto Rico, using the 6th Bomb Group (VH) as the test

group. The 6th Bomb Group quickly proved the practicality of the operation by completing all training requirements ahead of schedule. Consequently, Second Air Force promptly approved Col Miller's plan and christened the new operation as the Gypsy Task Force. (30:1) The plan called for the establishment of three bases at Antilles Air Command fields in the Caribbean: Vernam, Jamaica; Batista, Cuba; and Borinquen, Puerto Rico. These fields became the advanced flying training bases for all VHB units preparing to deploy overseas.

The 502nd Bomb Group was the first 315th unit to participate in the Gypsy Task Force. Since the 6th Bomb Group had completed all training ahead of schedule, the 502nd Bomb Group, collocated with the 6th at Grand Island, was sent to Borinquen Field and began flight operations on 22 December. Under Project Gypsy, all B-29 bomb groups were scheduled to train in the Caribbean in the early months of 1945 using the personnel rotation system established by Second Air Force.

With necessary exception, 1/3 of the combat crews of each VH group will accomplish flying training with the Gypsy Task Force for ten (10) days; 1/3 of the combat crews will be involved in the movement either to or from the advanced area and understudying the crews in training; the remaining 1/3 of the combat crews will accomplish ground school and flying training at their home stations in the rear area. (31:2)

Thus, the Gypsy Task Force project provided an excellent opportunity for the 315th's bomb groups to escape the wintry conditions in Nebraska and to complete their flight training.

On 17 December, the 315th Headquarters received an important teletypewriter message (TWX). The TWX directed special modifications to the wing's B-29s, including the removal of the armament and central fire-control system. (38:Dec 44) Instead, the B-29s were to be equipped with only a new radar-directed tail turret, the APG-15, having three 50-caliber machine guns. The plexi-glass gunners' blisters protruding from the sides of the B-29 were also to be removed and replaced with smooth enclosures. The 315th flight crews were reduced from 11 to 10 men by replacing the 3 original gunners with 2 visual scanner positions. The TWX also notified the 315th that the APQ-13 radar navigation and bombing system would be replaced by the new AN/APQ-7 radar, code named "Eagle." This TWX raised many questions about the future role of the unit.

The modifications to the 315th's B-29s were based on a special study conducted at Alamogordo, New Mexico. The study originated to test the vulnerability of the B-29 to fighter attack. Lt Col Paul Tibbets, while assigned to Grand Island AAF, had been ordered to test the B-29 in simulated combat with fighters

at Alamogordo AAF, New Mexico. Unfortunately, the heavyweight B-29 proved difficult to control at 30,000 feet. Lt Col Tibbets reported, "A too-steep bank or sudden movement of the controls might cause the plane to stall." (15:149) Then one day his test B-29 was down for repairs at Grand Island, and he borrowed another B-29, equipped only with tail guns, and took off for Alamogordo. The lighter weight B-29's climb performance was remarkably better. In subsequent tests above 30,000 feet, Lt Col Tibbets found that he "could turn in a shorter radius than the attacking P-47." (15:149) Further tests showed the lightweight B-29 could also fly well above 30,000 feet and at speeds greater than some fighters were capable.

Based on the Alamogordo study, the 315th was selected as the first unit to test the tactical potential of lightweight (stripped) B-29s in combat against Japan. The stripped B-29s would also be able to carry the maximum 20,000-pound bomb loads over the long distances required to reach Japan from current American bases in the Pacific. With the addition of the new APQ-7 Eagle radar, the stripped B-29s would also be able to conduct precision bombing from higher altitudes and in adverse weather. Thus, the 315th's new combat role became high-altitude, all-weather, precision bombing. As a result, the 315th was directed to strip its B-29s until modified B-29s, designated B-29Bs, could be rolled off the assembly line.

On 20 December, the 315th received its warning order for movement to the Pacific Theater of Operation (PTO). The warning order established readiness dates of 1 February and 1 April for the ground and air echelons, respectively, of the 315th Headquarters, 16th Bomb Group, and 501st Bomb Group. These units immediately began preliminary preparations for the movement. Later, Air Terminal Service Command personnel arrived to give three days of instruction on proper methods of packing and crating supplies and equipment. The units then began the difficult task of building crates and boxes for shipping equipment overseas. The apprehension caused by these preliminary actions was heightened by the receipt of the movement order on 26 December. Fortunately, the concurrent announcement of numerous promotions and a new furlough policy helped to offset the apprehension. The furlough policy entitled personnel to 15 days of leave prior to their departure date unless they had already used 15 days since 1 July. Nonetheless, everyone knew the 315th would soon move out for overseas duty.

Despite the hectic pace in December, the Christmas spirit was alive in the 315th. At the 411th Bomb Squadron, the mess hall was decorated in style with trees, wreaths, streamers, and giant candles. At the 16th Bomb Squadron, the Jewish men volunteered to perform mess hall duties on Christmas. Col Gurney, the 16th Bomb Group Commander, commended their actions by stating, "When men work together this closely, with mutual regard

for each other's religious beliefs, no foe, however strong, can ever break the spirit of American idealism." (32:Dec 44) Tragically, this was the last Christmas for some men as the 315th prepared for combat in 1945.

The year 1944 closed on a somber note for the men of the 430th Bomb Squadron, 502nd Bomb Group. On 31 December, one of the squadron's B-29s crashed during a training flight at Borinquen Field. Captain Frank H. Beales, pilot, and First Lieutenant Barclay H. Beeby, instructor pilot, had tried to immediately return to the airfield to land their B-29 following the failure of the number one engine on takeoff. However, the aircraft rolled over and crashed just 500 yards from the end of the runway. Five of the six-man crew on board were killed. This was the first aircraft accident for the 315th at the Gypsy Task Force, and it wouldn't be the last.

In January 1945, Second Air Force produced a new training manual for the 315th. The flight manual was entitled, B-29 Flight Training Directive (Special) and outlined the revised training requirements for the 315th's high-altitude, precision instrument bombing mission. (25:--)(Fig. 13) It deleted the requirement for formation flight training and increased the number of long-range missions. Fortunately, the 315th's planned operations in the Caribbean under the Gypsy Task Force were ideal for completing the new training requirements.

The 16th and 502nd Bomb Groups began rotating personnel to the Caribbean in January. They were assigned to Gypsy Sub Task Force No. 3 at Borinquen Field, Puerto Rico.

The first [16th] aircraft for Borinquen Field left Fairmont Army Air Field on 3 January 1945. On board were Lieutenant Colonel Andre F. Castellotti, Deputy Group Commander and Tactical Inspector, Major John S. Gillespie, Assistant Group Operations Officer, and Captain Oliver C. Mosman, Jr., Group S-2. Together with other officers, they constituted the advance party, which was to prepare the way for the rest of the organization. The B-17 made the trip in less than 16 hours with one stop at Miami, Florida, for refueling. It was followed on 5 January by more B-17s and on 9 January, the first B-29s arrived with crews ready for training. The 15th Squadron was the first to send its crews to Puerto Rico. It was to be followed by the other two squadrons in order. (32:Jan 45)

This personnel rotation scene was repeated many times by the 315th bomb groups in early 1945 to complete the advanced phase of flying training. The flight crews flew numerous 3,000-mile overwater missions under weather, sea, and terrain conditions similar to those they would face in combat. Additionally, the

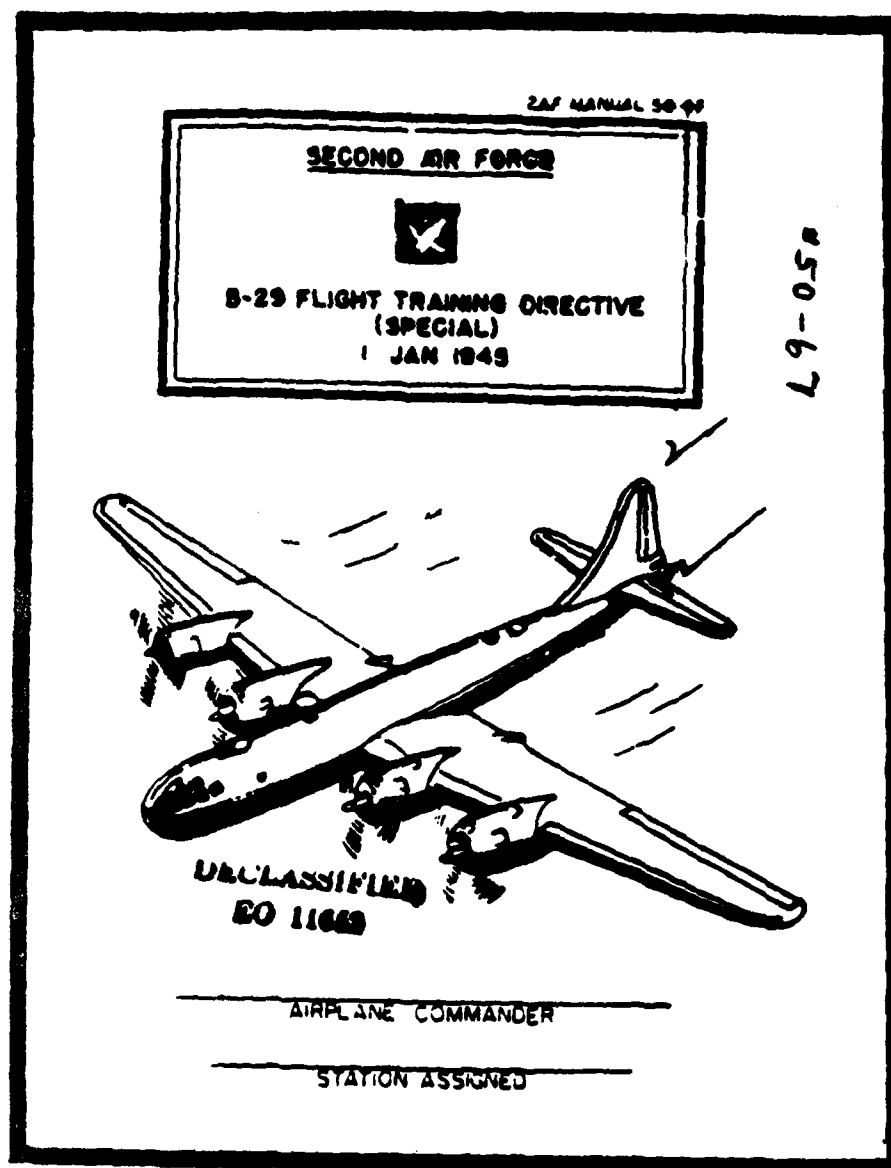


Figure 13

flight crews and ground support personnel worked to improve operational efficiency since this was their final simulated combat training opportunity before they deployed. Naturally, this division of unit operations between the Caribbean and Nebraska created difficult supply, administrative, maintenance and personnel problems. However, they were handled, and the ideal training conditions more than compensated for the logistical problems encountered.

To support the groups' divided operations, maintenance personnel spent many long hours exposed to Nebraska's winter

weather trying to keep the B-29s flying. The B-29 was particularly troublesome for maintenance because its engines ran too hot and failures were common. (Fig. 14) Its cylinder baffles were inadequate and contributed to engine overheating. In addition, Boeing's design of the landing-gear door and bomb-bay door systems led to engine overheating.

The landing-gear doors were operated by an electric jackscrew and didn't come up until the gear was up. The bomb-bay doors were also operated by jackscrews. Both of these systems took much too long to complete their cycle. On takeoff the engines would overheat just waiting for the gear doors to get closed. The added drag only made the engine overheat problem more severe. (50:1)

Leaky carburetors caused frequent engine fires until maintenance personnel discovered the problem was due to the carburetor mounting bolts bottoming out before they were snug enough to seal the carburetor. The cold weather in Nebraska magnified these problems because most of the maintenance had to be performed outside due to limited hangar space. (Fig. 15) At Fairmont AAF there were only three hangars, and each hangar accommodated only one B-29. Moreover, the B-29's engines were also difficult to start in cold temperatures and required special priming by maintenance personnel to get them started. Since the groups' maintenance staffs were split between the Caribbean and Nebraska bases, some men worked two and sometimes three shifts without sleep on the cold Nebraska flight lines trying to keep the Superforts operational.

During January, the 315th increased its preparations for deployment and operations overseas. Between 3 and 6 January, the 315th Wing Headquarters successfully conducted a Command Post Exercise simulating jurisdiction over all four bomb groups in the combat theater of operation. From 11 to 30 January, Gen Armstrong and his selected staff traveled to the Marianas to study the 315th's future home for combat operations. Ground echelons of the 16th and 501st Bomb Groups completed their final preparation for overseas movement (POM) processing. The 501st also completed its final bivouac training exercise before deployment. On 24 January, the 331st Bomb Group received its movement orders as well as a new Group Commander, Colonel James N. Peyton. Moreover, the 331st was at full strength for the first time since activation with the arrival of its final personnel elements from Dalhart Field and 31 additional flight crews. The Second Air Force also increased each group's authorized aircraft strength from 30 to 45 Superforts. Finally, by the end of January, all in-unit B-29 modifications were nearly complete, except for the installation of the APQ-7 radar which was unavailable.



Figure 14
501st Group mechanics
work on B-29 engine at
Harvard AAF, 1944.



Figure 15
Flight-line maintenance at Harvard AAF, 1944.

The 315th Wing Headquarters submitted a special request to Second Air Force for civilian experts in the B-29. By January, it was increasingly apparent that the VHB units in training were not being kept abreast of the B-29 equipment improvements made at the factories. Consequently, the 315th wanted 24 civilians to accompany the wing overseas, if necessary, to bring the wing's specialists up to date on the latest B-29 systems improvements.

Among others, the following type experts were listed in the request: a man from the Wright Aeronautical Works to operate on engines; a Boeing-trained engineer; an advisor on flight controls from the Minneapolis Honeywell Corporation; a Goodyear fuel cell repairman; a Western Electric radar worker; a bomb-sight maintenance man from the Victor Adding Machine Company and others. If this request is granted, these civilians would be allotted to the Wing and groups according to their respective specialties and the needs for their services. (38:Jan 45) (Appendix 6)

This request reflected Gen Armstrong's demand to have highly qualified unit personnel and the best trained B-29 wing.

In January, the Bob Hope show toured several of the 315th's units. Between 1630 and 1800 hours on 11 January, Bob Hope, Jerry Colona, Frances Langford, Vera Vague, and Tony Romano performed for the enlisted men of the 315th Headquarters at Peterson Field. Later that night at the Broadmoor Hotel in Colorado Springs, these entertainers were the honored guests at a reception dinner for Gen Armstrong and officers of the 315th Wing. (Fig. 16) The next day, the Bob Hope show was repeated for the members of the 331st Bomb Group at McCook Army Air Field. Entertainment by Hollywood stars was a significant morale booster for the 315th as well as other units throughout the war.

The Gypsy Task Force was costly for the 502nd Bomb Group in January with four training accidents, two resulting in fatalities. In the first accident, a B-29 assigned to the 411th Bomb Squadron ditched off the coast of Haiti due to an uncontrollable fire in the number two engine. The plane broke in half during the ditching, and only five men from Crew 1104 were rescued the following day. The other five crew members were never found. Later, on 26 January, Crew 1107 from the 411th crashed near Fort Riley, Kansas, while enroute from the Caribbean to Grand Island AAF. The accident was due to fuel exhaustion brought on by excessive fuel consumption while flying in strong headwinds. Six of the 15 men on the B-29 were killed. On the same day, Crew 1117, 411th Squadron, crash landed near Lexington, Missouri, while flying to home base. Again the cause of the accident was fuel exhaustion due to adverse weather and navigational error. Fortunately, there were no casualties.



Figure 16

Bob Hope, Frances Langford, and Gen Armstrong at the Broadmoor Hotel,
Colorado Springs, Colorado, 11 January 1945.

The final accident for the month occurred on 27 January. Crew 203 from the 402nd Squadron was on a practice bombing mission out of Borinquen Field when the number one and number two engines and electrical system malfunctioned. The crew had to shut down the number two engine while the number one engine had to be operated at drastically reduced power. After checking the electrical problem, the crew found they could not extend the landing gear or wing flaps. The young aircraft commander, Captain Arthur W. Dippel, and his crew headed for Borinquen Field, losing altitude all the way. Once over land and at 4,000 feet, Capt Dippel rang the alarm bell for his crew to bail out. Four men in the front compartment bailed out, but those in the rear of the plane did not hear the bell. By the time he discovered this, Capt Dippel knew the aircraft was too low for the remaining crew to bail out. An instructor pilot was in the copilot's seat and began flying the airplane toward the runway at Borinquen Field. On the final approach, Capt Dippel took over the controls and made a perfect no-gear, no-flaps crash landing. As the aircraft skidded along the runway on its belly, sparks caused the plane to catch fire before it came to a stop. Fortunately, all the men escaped before the ensuing fire spread through the aircraft. The month of January was costly in lives and aircraft for the 502nd Group, but it could have been worse.

In February, the 315th units were busy completing their final preparations for overseas movement (POM) actions. Ground echelons of the 16th and 501st Bomb Groups completed POM processing and packed and crated their equipment for shipment overseas. In a three-week period, the 501st crated and stacked more than 175,000 pounds of equipment in plywood cases and marked each case with the unit code number, box number, and coded destination. On 20 February, advance parties from the 16th and 501st went to the Port of Embarkation (POE) in Seattle to coordinate final preparations for unit deployment. Meanwhile, the 331st and 502nd Bomb Groups secured and packed athletic and recreational equipment since these items were difficult to get overseas.

During the month of February, much of the Special Service department's activity revolved about morale problems in preparation for overseas movement. Among the pieces of recreational equipment which arrived during the month and were packed and prepared for shipment were: a public address system, a 2,200 book library, an ice-making machine capable of eighty pounds per hour, washing machines, electric irons, coke machines, bar fixtures, photographic equipment for a photo club, beer coolers, and a great amount of athletic equipment. Individual Group members examined much of the material secured and responded favorably. (39:Feb 45)

The 331st and 502nd followed in the footsteps of the 16th and 501st which were scheduled to deploy first. All four bomb group ground echelons were poised and ready for movement overseas by the end of the month.

By February 1945, all 315th personnel had completed, or were scheduled to complete, their final phases of predeployment training. Second Air Force directed the 315th Headquarters staff to participate in Project Gypsy prior to deployment overseas to increase wing staff and group coordination in unit combat operations training. An advance party from the 501st Bomb Group went to Vernam Field, Jamaica, to prepare for its scheduled Gypsy Task Force training. On 16 February, the first 45 of the scheduled 180 wing and group officers began a 2½-week training class on the APQ-7 Eagle radar at Victorville, California. The 315th Wing Headquarters also formulated plans to send crew radar operators to Boca Raton, Florida, and Victorville, California, for extensive training in the APQ-7 radar. Moreover, the 315th Wing Radar Intelligence Section began a program to secure radar identification charts and scope photos of Japan for bomb group and squadron study.

Photo strike pictures of B-29s from the XXI Bomber Command were received and distributed to the Groups for an exercise involving interpretation and compliance with the Wing photo interpretation report system. A program consisting of three problems for radar and visual target and terrain identification was distributed to the Groups, placing emphasis on the industrial targets of Japan. (38:Feb 45)

Finally, the 315th was granted authorization to obtain 24 civilian technicians to supplement the training of its maintenance specialists. By the end of February, time for training was rapidly running out.

In March, the 331st and 501st Bomb Groups began training in the Caribbean. They were assigned to Gypsy Sub Task Force No. 2 at Vernam Field, Jamaica, which became operational with the arrival of the 501st on 3 March. Originally, training for the 331st and 501st was scheduled for February, but was delayed until March because the facilities at Vernam were poor and the runway was too short for B-29 operations. After arriving at Vernam, the 331st and 501st faced a severe shortage of maintenance personnel and maintenance equipment, especially aircraft and radar parts. (Fig. 17) In addition, no night operations were permitted because of unlighted terrain obstructions around the field. Despite these problems, the 331st and 501st put their best efforts into accomplishing the training.

The day was divided into two flying periods of six hours each. Briefing was held at 0300 each morning and at 1000 for the training missions involving

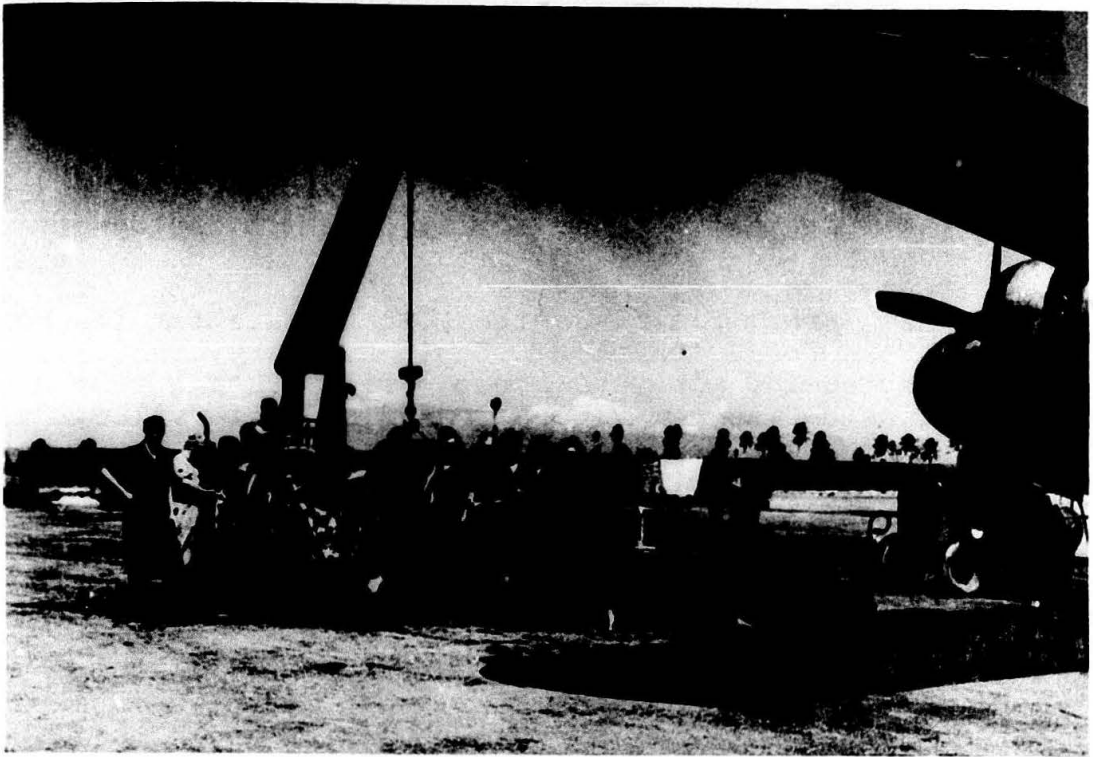


Figure 17
Engine maintenance in the Caribbean.

bombing and gunnery. Two adequate bombing ranges, Walker Bay and Portland Rock, were situated within a fifty mile radius of the base, and, since our ranges in Nebraska had serious limitations, especially for radar bombing, every effort was made to accomplish all radar bombing requirements from Vernam and these efforts were successful. The base's situation also afforded a good aerial gunnery firing range over the ocean and three P-63* type fighters were based at Vernam to provide mock interceptions for camera gunnery. Once our operations began to function smoothly, a good amount of training was accomplished. (39:Mar 45)

Flight training included long-range, 13-hour missions to the eastern coast of the United States and back before nightfall at Vernam Field. The simulated combat operations for the 331st and 501st at Vernam were challenging and productive with all personnel honing their respective skills.

*The P-63 Kingcobra was a modified version of the P-39 Airacobra.



Figure 18
Relaxing in the Caribbean.

On one mission, First Lieutenant Leonard Jones, 501st Bomb Group, and his crew tested the theory of the stripped B-29 versus fighters at high altitude. The crew took off, climbed to 25,000 feet, and radioed down to send a P-39 fighter up. They knew the P-39 had been designed with high-pitched wings for maneuverability, and they believed it wouldn't be able to reach the B-29s at altitude. Within minutes the P-39 was right off Lt Jones' wingtip. He climbed to 30,000 feet, but right away the P-39 was there again. After this experiment, Lt Jones' crew was convinced they would see Japanese fighters at 30,000 feet when they started combat operations overseas. Until then, they wanted to enjoy their stay in the Caribbean.

The Caribbean environment was great for morale. The warm, tropical climate at Borinquen and Vernam Fields was a welcome change of pace from the wintry days in Nebraska.

It just couldn't happen to us. But it did! Uncle Sam actually paid our expenses for a trip to the land of 'Rum and Coca-Cola,' and he picked the best time of the year for it--January, February, and March. The

War Department called us 'The Gypsy Task Force' and they meant it. Borinquen Field, Puerto Rico, was the ideal spot for a Gypsy. Swimming pools, a golf course, and soft, tropical breezes that were a far cry from the sub-zero blasts that were hitting FAAF [Fairmont AAF]. (32:Mar 45) (Fig. 18)

At Vernam Field, Col Peyton, the 331st Group Commander, also set up a pass system for 20 officers and enlisted men each day to take the 2-hour train ride to visit Kingston. Unfortunately, the morale building experiences at the Gypsy Task Force were sometimes offset by tragic training accidents.

Two more fatal aircraft accidents occurred in March. In the first on 6 March, a B-29 assigned to the 402nd Bomb Squadron, 502nd Bomb Group, crashed into the golf course near the runway at Borinquen. Earlier in the flight, the plane was at 10,000 feet and the number one and number three engine propellers malfunctioned. By the time the pilot, Second Lieutenant Harold C. Anderson, and his crew returned to Borinquen, the number three engine had been feathered and the number one engine was on fire. The aircraft stalled while trying to land and crashed short of the runway. Six of the nine crew members on board were killed. On 10 March, the 501st Bomb Group had its first fatalities. A B-29, piloted by First Lieutenant V. Tulla, crashed while trying to land at Alexandria AAF, Louisiana. The ten-man crew was killed. It was a severe blow to their fellow group members, but the intensive training continued.

In March, 315th personnel finally started learning about the APQ-7 Eagle radar. The Eagle radar had been conceived by Professor Luis W. Alvarez, Massachusetts Institute of Technology (MIT), and developed by MIT's radiation laboratory and Bell Telephone Laboratories. (19:57) The new Eagle radar equipment employed a much higher frequency than previous radars and gave a clearer presentation of ground images on the radarscope. The Eagle was ten times more efficient than the radar equipment being used in other B-29s. (18:30)

The antenna was the key to the APQ-7 radar bombing system. The antenna was a straight structural beam 16 feet long, mounted on the lower part of the fuselage. It mounted 250 dipoles and used electronic scan rather than rotational scan. It produced a much finer degree of resolution, but it surveyed only a 60 degree forward sector. It had a .4 degree beam width. (7:89) (Fig. 19)

The antenna was housed in an 18-foot wide, airfoil-shaped section and mounted perpendicularly on the underside of the fuselage. The mounting of the antenna below the fuselage permitted greater target identification but also made the B-29 look somewhat like a biplane. The APQ-7 Eagle radar was a new and significant element in the 315th's future combat operations.



Figure 19
The APQ-7 Eagle radar antenna.

To use the Eagle radar system, the 315th's crews had to learn a new method of attack called synchronous radar bombing. With the APQ-7 system installed, the radar bombardier and his radarscope were not collocated with the Norden optical bombsight in the nose of the B-29. Instead, the bombardier sat aft in the navigator's compartment and his radar was synchronized electrically with the optical bombsight. During a bomb run, the bombardier tracked and aligned the target using a reticle on his scope. This radar information was automatically fed to the bombsight and produced a radarscope display of the target track to fly, ground speed, and time for bomb release. Thus, the term synchronous radar bombing meant the bombsight was used in conjunction with the radar equipment during the bombing attack.

The 315th's flight crews modified their bomb run procedures to incorporate the synchronous radar bombing method. The target information displayed at the optical bombsight was also presented on an indicator in the cockpit.

The pilot set the plane on automatic pilot, turned to the track displayed on the PDI (Pilot's Direction Indi-

cator), and held that course to the target. He also stabilized the airplane speed and altitude, so that the pilot himself was controlling all three parameters of the bomb run. In the usual approach to optical bombing, the pilot only controlled speed and altitude; the bombardier held the course. (1:130)

During the target run, the bombardier used the APQ-7 radar and visual sighting to spot the target while the autopilot's gyroscopes kept the aircraft straight and level. At the target, the bombsight indicators came together, a red light flashed in the cockpit to signal the bomb-bay doors had snapped open, and the bombs were released. The crews spent many hours learning the synchronous radar bombing method and even more hours in the air trying to perfect their procedures.

In March, the 501st Bomb Group picked up the first of the 315th's "Flyaway" B-29Bs at the Bell-Marietta aircraft factory in Georgia. The term flyaway meant the flight crews picked the aircraft up at the factory and flew it to their home bases prior to deployment overseas.

The crews that received them have certainly 'gone to town.' The first plane, #600, was given to Major Tintensor, of the 21st Squadron, who immediately named it 'ROADAPPLE' with a picture of a horse painted on the side of the nose. The second ship, #615, was given to Captain Braun, also of the 21st Squadron, who immediately named his airplane 'BEEGAZBURD,' which was very appropriate for the occasion. (40:Mar 45) (Fig. 20)

The B-29Bs were specially modified B-29s with the armament removed and the APG-15 radar tail gun turret and APQ-7 radar installed. In addition, the landing-gear doors and bomb-bay doors had been modified to a pneumatic system to reduce system cycling times. The engine baffles were also modified to make the engines run cooler. The flyaways represented the bulk of the aircraft programmed for the 315th to use in combat against Japan. Thus, the four bomb groups continued to pick up additional flyaway B-29Bs as they came off the assembly lines.

The 315th flew its first coordinated wing training mission in the Caribbean on 27 March. A maximum bomb load, 3,000-mile mission was planned from Borinquen Field to Charleston, South Carolina, closely simulating a Pacific theater combat mission from the Marianas to the Yokosuka Naval Base near Tokyo. The Gypsy Task Force (GTF) Headquarters acted as a bomber command and authorized the 315th Wing staff to act as the tactical headquarters. The GTF sent a field order to the wing directing it to attack Yokosuka, and the 315th's Operations and Training staff then issued a wing field order to alert the bomb groups. Each group briefed its crews on the mission, including a detailed description of enemy defenses in the target area. The



Figure 20
Capt Braun's Flyaway B-29B.

wing launched 16 aircraft for the mission using 15-minute take-off intervals. Two 502nd Bomb Group crews had engine trouble over the target area and made emergency landings at Jacksonville and Morrison Fields in Florida. The remaining aircraft successfully dropped their concrete bombs in the ocean near their simulated target and returned to Borinquen Field.

The 315th's simulated attack on Yokosuka (Charleston) was a valuable training exercise. For the first time, the wing and group staffs acted as a tactical organization and used operational procedures similar to those in combat. Their coordination on mission planning, briefings, reports, communications, and maintenance improved the cooperation between the staffs. On the other hand, the mission revealed flight crew weaknesses in radar identification, radar bomb run training, and LORAN navigation procedures. As expected, the crew members who had attended the APQ-7 school at Victorville were better at radar target identification than those who had not yet attended. The results of this mission indicated the 315th needed to fly additional training strikes using the Eagle radar equipment and

procedures it would employ in combat against Japanese industrial targets.

A second wing mission was immediately planned for 6 April. A wing conference was held at Borinquen Field on 4 April to plan the mission. The Newport News Shipbuilding and Drydock Company at Norfolk, Virginia, was the target, simulating the Mitsubishi Drydock Company at Kobe, Japan. (Fig. 21) Once again, the GTF acted as bomber command and ordered the wing to attack the target with all four bomb groups. The wing staff alerted the groups, and representatives from the 331st and 501st flew to Borinquen from Vernam and joined the 16th and 502nd for the wing briefing held on 5 April. The bombing attack was planned for 30,000 feet using a wind vector, or no drift, downwind bomb course similar to the first mission. After the briefing, the 331st and 501st men returned to Vernam to brief their crews and prepare for the mission.

The following morning, 6 April, the 315th launched nine B-29s to strike the Mitsubishi (Newport) installations. The 16th and 502nd supplied five aircraft from Borinquen Field while the 331st and 501st launched four planes from Vernam Field. The weather over the target was a solid overcast at 22,000 feet and ideal for radar bombing. Unfortunately, the two 502nd crews had to make a dead reckoning bomb run, but all other crews used radar bombing and had excellent results. The second wing training mission was very successful, and the groups requested more of the same to allow additional crews to practice inter-group operations before deploying overseas.

In April, the 315th altered its training program to comply with a change in XXI Bomber Command tactics. Between 24 March and 3 April 1945, General Curtis LeMay, Commander of XXI Bomber Command since January, ran four experimental missions to test the selective precision bombing capabilities of his APQ-13 radar-equipped B-29s. Unfortunately, the APQ-13 proved inadequate, and Gen LeMay temporarily abandoned the effort. Instead, he directed his B-29 wings to methodically destroy Japanese urban industrial areas from greatly reduced altitudes. Subsequently, the 315th was advised to expect to conduct night, all-weather, precision radar bombing operations at 15,000 feet instead of 30,000 feet. The 315th modified its training program toward this new guidance and planned to keep a small headquarters staff at Peterson Field and in the Caribbean to oversee group training during the remaining weeks before deployment.

THE SERVICE GROUPS

American and Allied air power in Europe during 1944 stimulated the development of a new type service group. Prior to 1944, enemy air strength had led to a concept of flight operations

from individual squadron airdromes. This was done to avoid the destruction of entire units on the ground. During this period, service groups had performed third echelon (field) maintenance and supply functions for two combat flying groups which were dispersed at separate airdromes. These service groups were also dispersed at a considerable distance from both flying groups, thus creating an inefficient and clumsy service group system. However, by 1944, the number of aircraft furnished to the combat theater increased dramatically, and Allied air superiority had been established. This increase in aircraft and resultant air superiority permitted the concentration of forces at airdromes without undue risk. As part of the plan to concentrate flying groups at airdromes, the service groups were also reorganized to support the new flying group operations.

The new type service group was streamlined to provide complete station complement services to keep one flying group constantly combat ready. The organization and training of the new, also called special, service groups was specified in the Army Air Force's Service Group (New Type) Training Manual, dated 23 May 1944. (Fig. 22)

Directives setting up Service Groups (Special) provided that all personnel of other arms and services were to be absorbed into well-integrated organizations consisting of three streamlined squadrons: a Headquarters and Base Services Squadron; a Materiel Squadron; and an Engineering Squadron. The special staff organizations of the older groups were thereby to be eliminated. Each Service Group (Special) was to serve one combat group, and to be capable of operating a base complete with Finance service, fixed communications, Medical dispensaries, interior guard, internal security, utilities, firefighting, and motor transportation. Moreover, if tactical situations necessitated such action, they were to be capable of supplying combat groups at dispersed airdromes through the use of refilling and distributing points, and maintaining them by means of mobile repair units. (24:284)

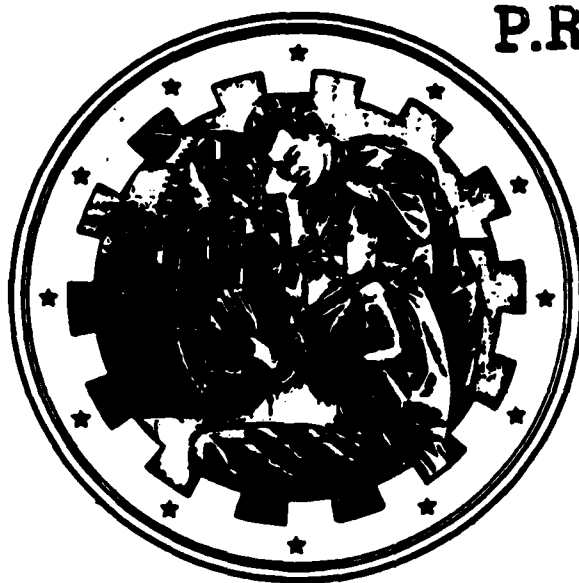
The total complement of men in the new service group's three component squadrons was stripped to the bare essential number needed to provide quick, efficient operations. The new service groups worked "right with the combat groups, so close to it that the two groups, combat and arms, are almost one." (36:May 44)

The development of the Service Groups (New Type) coincided with the introduction of the B-29 Very Heavy Bombardment (VHB) Program, and the two were linked. In March 1944, the B-29s were rolling off the assembly lines and available for use in training programs. In April, the Twentieth Air Force had been created, and B-29 Combat Crew Training Programs were initiated.

DECLASSIFIED



SERVICE GROUP
New Type
TRAINING MANUAL
P.R.C



ARMY AIR FORCES
AIR SERVICE COMMAND

PATTERSON FIELD, OHIO



DECLASSIFIED

Figure 22
Service Group (New Type) Training
Manual, dated 23 May 1944.

In May, the training manual for the new service groups was published, and the stated support requirements for the new service groups were remarkably compatible to the support needs of the new B-29 VHB units.

The original object of the new style of service group organization incorporated in these units had been to accomplish the integration of arms and services, with the addition of conventional base functions, but the project was so closely associated with the preparation of the VHB units for the Twentieth Air Force that the two programs were quickly identified with each other in the minds of all concerned. Furthermore, they were both under the jurisdiction of the same special body, the Executive Committee of the B-29 Liaison Committee, headed by Brigadier General K. B. Wolfe. (24:280)

Thus, the new service groups were also earmarked for the B-29 VHB program. However, to meet the large mission support requirements for the Twentieth Air Force's future force of a thousand B-29s, many new service groups were needed.

The 24th, 73rd, 75th, and 76th Service Groups were activated in May 1944 under the new service group concept. The 73rd and 76th were activated on 11 May followed by the 24th and 75th on 24 May. The 75th and 76th were based at Warner Robins Air Service Center, Warner Robins, Georgia, while the 24th and 73rd were stationed at the Air Service Command Training Center, Fresno, California. All four service groups were destined for assignment to the 315th Bomb Wing (VH) and immediately began to organize and train for their future combat support duty.

The Service Group (New Type) Training Manual specified a two-phase, six-month training period with three categories of training. The initial phase was the Activation and Unit Training period. This period lasted approximately two months and began when the units reached 90 percent of authorized strength at Fresno and Warner Robins. For the four-month second phase, the service groups were transferred to another base to provide operational support to a combat flying group also in training. During these two phases, three categories of training were accomplished: Basic Military Training (BMT), Basic Technical Training (BTT), and Advanced Technical Training (ATT). BMT "consisted of instruction in subjects common to all soldiers, and necessary for discipline, security, morale, and proper physical conditioning." (24:128) BTT consisted of elementary specialized training and prepared the soldier for the "performance of a specific occupational function within a unit." (24:128) ATT was designed to provide skilled technicians and specialists. All three categories of training were conducted throughout the six-month training program.

The service groups completed their first phase of training at Fresno and Warner Robins. They quickly overcame initial start-up problems common to all newly formed units and began the unit training period. The 4506th AAF Base Unit (Service Group Special) at Fresno and the 4510th AAF Base Unit (Service Group Special) at Warner Robins provided the instructors and instructional materials for the BMT. The facilities for BTT and On-the-Job Training (OJT) were provided by the Air Service Commands at the respective bases. The 76th Service Group described the atmosphere at Warner Robins during their first phase of training.

To catch all the excitement, fervor, and fullness of purpose of this organization, to realize to some degree its deep feeling of a great mission and the intangible presentment permeating all of its personnel, from the Commanding Officer down to the newest buck private, of a coming rendezvous with destiny, one would have to come to its present location at Robins Field, Georgia, and spend a few days in the field, taking thousands of feet of film in an effort to capture on celluloid the vital, stirring pangs of a unit which the Air Service Command has already marked for an important role in the air war of the near future. In lieu of this imagined documentary film, an unfeeling, prosaic typewriter must labor to catch on paper enough of the growth and forward surge of this revolutionary type of service group to give a reasonably accurate picture of its brief history and present status. The readers of this squib, whoever they may be, must bear one thing constantly in mind as they leaf through the pages to follow--no musty archives or time-worn documents form the structure on which this skeleton of words is built. A scene in the field as a low-flying B-25 sprays troops in training with gas; several hours down at the Instrument Repair Building watching soldier specialists from the engineering squadron getting direct on-the-job training; a day up in Atlanta witnessing some of the Group's airplane and engine mechanics dismantling a B-29--this is the warp and woof, the solid foundation of fact which underlines the story to follow. (36:May 44)

During this first phase of training, service group personnel conducted their first bivouac exercise, learned the basics of their jobs, and started working together. Now they were ready for advanced training.

All four service groups moved to bases in Kansas to start the final four-month phase of training. The 76th was the first to move out. On 18 August 1944, the unit headed for Great Bend AAF. (Fig. 2) Shortly thereafter, on 1 September, the 73rd

"It Could Be Me"

Out in the plains of Kansas
Where man has feared to go,
They built a mighty airbase
In the heat and wind and snow.
And when they had it finished
And stocked it well with men,
They named the damned place Walker
And flying then began.
From early in the morning
Till way into the night,
You can hear the drone of aircraft
And it fills your soul with fright.
For suppose this never ended--
Just suppose it had to be--
That someone had to stay here.
Ye gods, it could be me!

Author Unknown
75th Air Service Group
1944

Figure 23

entrained for the trip to its new home at Pratt AAF. The 24th and 75th Service Groups didn't depart Fresno and Warner Robins until November and were sent to Tinker AAF, Oklahoma. They spent 35 days at Tinker until space was available for them at their new training bases in Kansas. Consequently, the 24th and 75th didn't arrive at Smoky Hill AAF and Walker AAF, respectively, until December. The 24th's trip to Smoky Hill was particularly memorable.

The entire 24th Service Group departed from Tinker Field, Oklahoma, 9 December 1944, bound for Smoky Hill AAF, Kansas. The movement was made by truck and will long be remembered by all involved. A cold, freezing rain at the time of departure changed into a cold driving snow storm in the 20 hours required to complete the 265 mile trip. Breakfast was served by the Quartermaster Truck Company in Wichita, Kansas, at 0930, 10 Dec 1944. This stop allowed everyone to thaw out and begin living again. A hot chow was served at Smoky Hill AAF upon arrival, and was probably the best time of the entire journey. (33:Dec 44)

In Kansas each service group was assigned to support a B-29 flying group also in training at their base.

Unit and Combined Training was the final phase of training and had a two-fold purpose. First, the unit training portion was designed to enable the individuals of service group squadrons to work together. The training emphasized teamwork within, and between, squadrons to support the operations of the service group. The men learned how to perform their duties in cooperation with other members of their section. Secondly, the combined training portion provided a realistic training environment for each service group to perform its assigned mission. The combined training period had two major objectives.

1. To train individuals and specialists teams in the performance of their assigned tasks, using the tools and equipment that will be available in the theater of operation.
2. To weld all component units into an effective operating Service Group (New Type), capable of performing its assigned mission of supply and maintenance for the combat group under conditions likely to be encountered in the theater of operation. (24:74)

By the end of this intensive phase of training, the service groups would be fully capable of performing their combat group support mission.

In January and February, the service groups entered a period of hurried preparations for the coming overseas movement. They received their movement orders and passed the preparation for overseas movement (POM) inspections. Personnel completed final clothing and administrative processing, including immunizations. Teams of 6 to 24 men packed and crated required equipment as well as recreational and athletic materials. A detachment of enlisted men from the 24th's Utilities Section completed a training program on road and bridge building at the Osage City Bomb Range. The utilities sections of all four service groups also prepared their heavy equipment for shipment. Forced and tactical road marches with simulated aerial bombing, strafing, and gas attacks were conducted to maintain physical fitness and an awareness of combat operations. All personnel completed weapons training. The port call was received on 1 February, and advance parties from the 73rd and 76th left on 20 February for the Port of Embarkation (POE) in Seattle to coordinate the groups' movement overseas. Their time for final preparations was rapidly running out.

The service groups were redesignated as Air Service Groups (ASG) in January and reduced in manpower in February. The redesignation in January did not change the mission or compo-

sition of the service groups. It only changed the organizational title to Air Service Group, and the ASG's component squadrons were also redesignated as Air Materiel Squadrons and Air Engineering Squadrons. Effective 9 February 1945, a technical order change directed the elimination of the central fire-control (CFC) sections from each of the air engineering squadrons. The CFC sections were eliminated in response to the removal of the CFC systems on the 315th's B-29Bs. Thus, each ASG was reduced in strength by one officer and seven enlisted men.

Several morale boosting activities in January and February helped to offset the apprehension of the upcoming deployment overseas. On 6 January, the 24th ASG's Headquarters and Base Services Squadron personnel attended a party in Wichita, Kansas, given by the Boeing Aircraft Company and the USO. In addition, every effort was made to give personnel pre-embarkation furloughs and leaves. At the end of February, the groups held farewell parties to celebrate the end of training and the imminent departure for overseas duty.

DEPLOYMENT

In March 1945, the 315th Wing Headquarters sent six officers to the Pacific Theater of Operation (PTO) to make preliminary arrangements for the arrival of the wing's ground echelons overseas. Colonel Emile T. Kennedy, Deputy Chief of Staff, Supply and Maintenance, led this group of officers. They reached West Field, Tinian, on 19 March and established the 315th's overseas headquarters. However, their initial effort to prepare West Field for the arrival of the wing's personnel was in vain. On 2 April, the XXI Bomber Command informed Col Kennedy that the 315th had been reassigned to Northwest Field, Guam, because the 58th Bombardment Wing had been assigned to West Field, Tinian. Furthermore, the JCS had directed that the operational readiness date of the 315th "be deferred for thirty days." (5:524) Thus, on 5 April, Col Kennedy and his staff left Tinian for Guam. At Northwest Field they immediately began to complete priority arrangements for the "construction of temporary latrines, showers, kitchens, and an adequate water supply" for the ground echelons due to arrive in a few days. (38:Mar 44)

Meanwhile, the ground echelons of the 315th Wing Headquarters, 16th and 501st Bomb Groups, and the entire 73rd and 76th Air Service groups had moved out to the Port of Embarkation (POE) in Seattle, Washington. (Fig. 24) Between 5 and 8 March, these ground echelons boarded troop trains at their bases in Colorado, Nebraska, and Kansas and began the journey to the Fort Lawton staging area in Seattle. (Fig. 25) The rail journey went smoothly, and the experiences of the 501st ground echelon, commanded by Major Bob R. Lockhart and Major Harry L. Young, were common to all the units.

We were sent off in farewell gesture by local towns folk, wives, sweethearts, and the Band of the Army Air Field, Harvard, Nebraska. Quarters for enlisted men constituted troop sleepers and tourist cars. Officers traveled in pullman cars with connecting lounge. General opinion of enlisted men was that the troop sleepers proved more comfortable than the tourist car. Mess was provided by kitchen car and, considering the handicaps for serving, the cooks, mess sergeants, and mess officers are in line for congratulations on the quality and the manner in which the food was served. Administrative details necessary to be performed daily, such as sick call and morning report, were controlled by Squadron from the field desk accompanying troops. By 1600 hours on Saturday, 10 March 1945, both trains delivered the troops to Seattle and the transportation corps had delivered them by truck to Fort Lawton. (40:Mar 45)

At Ft Lawton, the ground echelons joined the respective advance parties sent earlier to the POE to complete final coordination for the movement overseas.

The 315th units spent several days at Ft Lawton completing final overseas processing prior to shipping out. Quarters were assigned, a physical examination was given, clothing was inspected, instructions were given on the care and preservation of individual clothing and equipment, and a movie on ship abandonment was shown. Due to the number of men processing, many of the inspections and examinations were accomplished rapidly--and less than thoroughly. The physical exams were conducted in a large gymnasium where the men were required to strip down and pass by a line of medical doctors at the rate of one doctor every two seconds. When the units weren't scheduled for processing, the men received passes to visit Seattle where they feverishly tried to live it up before boarding ship.

On 16 and 17 March, the men boarded their ships and set sail from Seattle. The 73rd and 76th Air Service Groups boarded the USS Dix, a naval transport, on 16 March and headed for Pearl Harbor. (34:Mar 45) The following day, 17 March and St. Patrick's Day, the ground echelons from the 315th Wing Headquarters, 16th Bomb Group, and 501st Bomb Group departed pier 37 in Seattle aboard the USS Exchange, a naval troop transport formerly used in the Mediterranean Sea tobacco trade. The USS Exchange was also bound for Pearl Harbor, and both ships sailed into Pearl on 25 March.

The ships anchored at Pearl Harbor for five days. The men were confined to the ship and the immediate dock area while the ships were replenished with supplies. Movies, boxing matches,

315TH BOMBARDMENT WING (VH) **TRAINING AND DEPLOYMENT BASING: 1944-45**

	315TH HQ	16TH BG	501ST BG	502ND BG	331ST BG	73RD ASG	76TH ASG	75TH ASG	24TH ASG
JUL 44	PETERSON FIELD COLORADO	DALHART AAF TEXAS	DALHART AAF TEXAS	DALHART AAF TEXAS	DALHART AAF TEXAS	FRESNO, CALIFORNIA	WABER BOMB GEORGIA	WABER BOMB GEORGIA	FRESNO, CALIFORNIA
AUG 44		FARMONT AAF NEBRASKA	HARVARD AAF NEBRASKA	GRAND ISLAND AAF NEBRASKA			GREAT BEND AAF, KANSAS		
SEP 44						PRATT AAF KANSAS			
OCT 44					McCOOK AAF NEBRASKA				
NOV 44								TINER AAF OKLAHOMA	TINER AAF OKLAHOMA
DEC 44								WALKER AAF KANSAS	SMOKY HILL AAF, KANSAS
JAN 45									
FEB 45									
MAR 45	POB MATTLA (A)	POB MATTLA (A)	POB MATTLA (A)			POB MATTLA	POB MATTLA		
APR 45	N.W. FIELD GUAM (G)	N.W. FIELD GUAM (G)	N.W. FIELD GUAM (G)	POB MATTLA (A)	POB MATTLA (A)	N.W. FIELD GUAM	N.W. FIELD GUAM	POB MATTLA	POB MATTLA
MAY 45	GUAM (ASF)	GUAM (ASF)	GUAM (ASF)	N.W. FIELD GUAM (G)	N.W. FIELD GUAM (G)			N.W. FIELD GUAM	N.W. FIELD GUAM
JUN 45				GUAM (ASF)	GUAM (ASF)				
JUL 45									

LEGEND
 (POB) - POINT OF EMBARKATION
 (A) - AIR ECHELON
 (F) - FLIGHT ECHELON
 (G) - GROUND ECHELON

NOTE: THE GROUND ECHELONS TYPICALLY MOVED IN
 ADVANCE OF THE AIR AND FLIGHT ECHELONS.

Figure 24

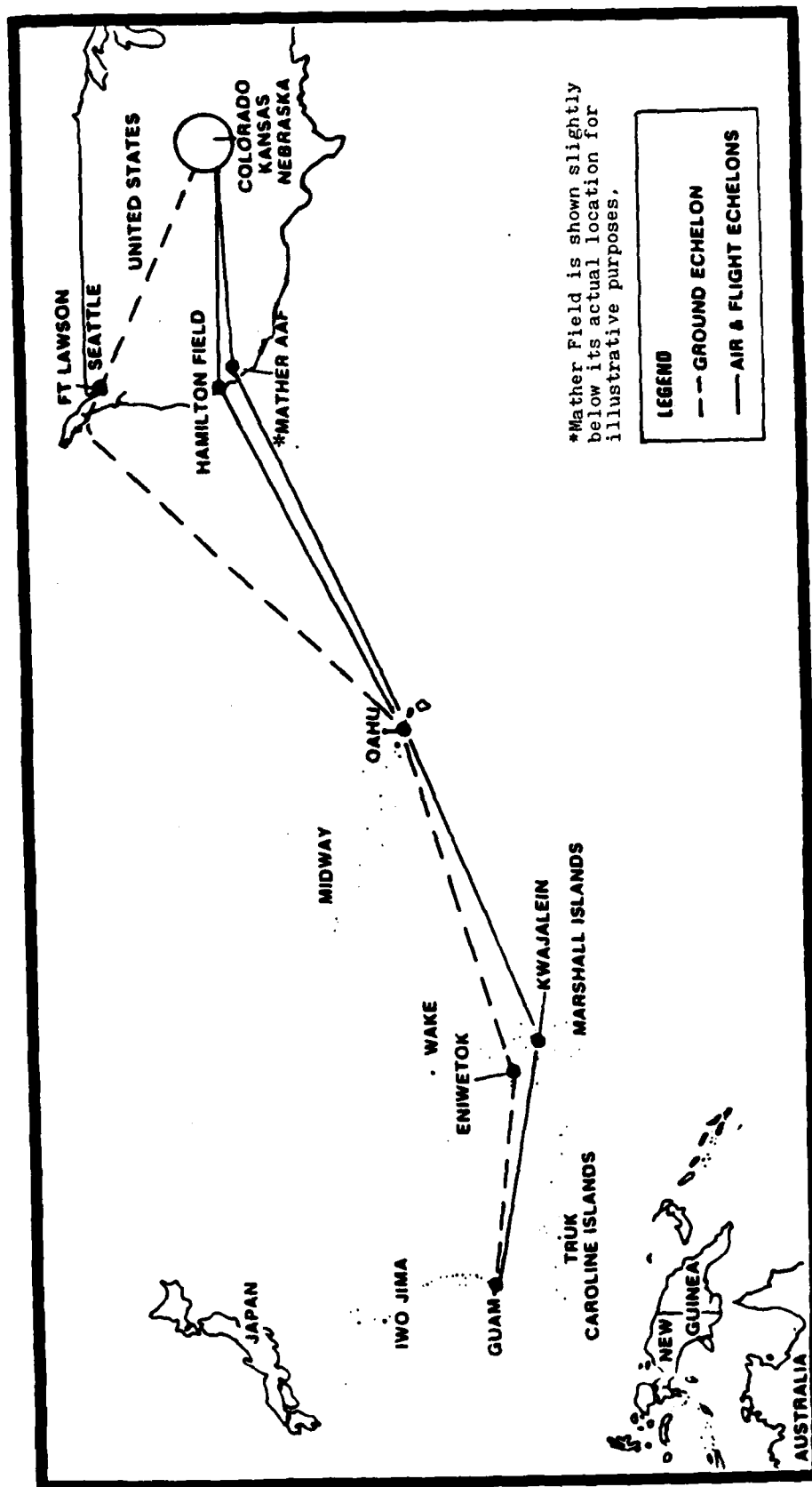


Figure 25
 315th deployment routing to Guam.

and a troupe of Hawaiian dancers performing hula shows helped to ease the monotony on board ship. At 1130 hours on 29 March, the USS Dix and USS Exchange joined a large convoy with three destroyer escorts and headed for Eniwetok in the Marshall Islands. Life for the 73rd and 76th Air Service Groups aboard the USS Dix was less than ideal.

The officers of the group were crowded into small staterooms below the decks while the enlisted men were crowded into the holds of the ship. Living conditions were poor due to the condition of the ventilation system which failed to operate during most of the trip. Due to failure of the ventilation system and the extreme heat below decks, it became necessary for both enlisted men and officers to spend most of their time, both day and night, on the topside. Space for preparing food for the AAF mess, which for both officers and men was separate from that of the ship's officers and crew, was inadequate. Only one water converter was in operation and water was strictly rationed. Salt water was used for bathing. (36:Mar 45)

The convoy crossed the international date line on 1 April, and the 315th's personnel were promptly issued membership cards initiating them into the "Sacred Order of the Golden Dragon." This card signified they had crossed the 180th Meridian. The convoy dropped anchor in the large lagoon of Eniwetok on 6 April.

The USS Dix and USS Exchange departed Eniwetok in separate convoys for the last leg of the voyage to Guam. The 73rd and 76th Air Service Groups, in the USS Dix, weighed anchor on 7 April and completed their 6,000-mile voyage at Apra Harbor, Guam, on 11 April. The two service groups disembarked the next day with the men in full back packs climbing down the side of the ship using nets. They were trucked 25 miles up the west coast of Guam to Northwest Field and caught glimpses of their new airfield being constructed in the jungle.

Meanwhile, the USS Exchange had steamed out of Eniwetok on 11 April with the remaining 315th personnel. It arrived at Apra Harbor on 14 April, and the men immediately began to disembark. It was well past sunset by the time they were trucked to Northwest Field. "It is easy to imagine the confusion that existed when that bunch of extremely tired, hungry, and grimy men reached the pitch black confines of the embryo airfield, loaded with one another's gear and equipment." (38:Apr 45) Col Kennedy assumed command of both ground echelons and established the 315th Wing Headquarters at Northwest Field on 15 April.

Back in the States, ground echelons of the 331st and 502nd Bomb Groups and the entire 24th and 75th Air Service Groups had

already begun their movement overseas. On 6 and 7 April, personnel from these units boarded troop trains at their home bases in Nebraska and Kansas and began to trace the same route to Guam used by the previous 315th units. The 331st and 502nd set sail from pier 39 in Seattle on 14 April aboard the USAT Cape Newenham. Two days later, on 16 April, the 24th and 75th boarded the USAT Kota Baroe and headed for Guam. Unfortunately, the Kota Baroe broke down shortly after leaving Hawaii. Her only escort ship continued on and left the Kota Baroe to fend for herself. While the ship's crew completed repairs, the 24th and 75th men felt alone and an easy target for the enemy. Chaplain Cooper and Colonel Joe L. Neyer, the 75th ASG Commander, seemed to have prepared for such an event. Before leaving the States, they had secretly written to the men's loved ones and asked them to write letters, but to address the letters to Chaplain Cooper.

The 75th Group, while sitting dejected and lonely in the middle of the Pacific blue, heard over the ship's speaker, 'The 75th Air Service Group please report for mail call.' The men couldn't believe their ears, but were a happy group as they received letters from home. Several thought Colonel Neyer had picked them up in Hawaii as he had gone off the ship there. Following mail call, they were each given a can of beer, also planned back in Kansas. (51:2)

By 11 May, both ships had arrived at Guam to complete the transfer of all 315th ground echelons to the PTO. The men were glad to set foot on land again and were anxious to get into the war as soon as their flight and air echelons arrived.

The 315th's flight and air echelons were divided into two sections for the deployment overseas. One air echelon section traveled by troop train to Hamilton Field, California. There they boarded Air Transport Command aircraft for the trip to Guam with intermediate stops at Hawaii and Kwajalein in the Marshall Islands. (Fig. 25) The other air echelon section flew overseas on 315th B-29Bs with the deploying flight crews. The 16th and 501st Bomb Groups used Kearney, Nebraska, as their staging base while the 331st and 502nd Bomb Groups used Herington, Kansas. They headed for Mather Field, California, as the POE enroute to Hawaii, Kwajalein, and Guam. (Fig. 25) The 16th Group's aircraft "Ellie Barbara and Her Orphans," commanded by Captain Ralph Howard, and the 501st Group's "Roadapple," commanded by Major Allen Tintensor, were the first 315th B-29Bs to follow this routing and arrived at Guam on 26 April. The deployment of the remaining 315th flight and air echelons continued throughout May, June, and July as each bomb group completed its stateside flight training.

Captain James C. Mitchell's crew, 501st Bomb Group, had a unique experience during their deployment to Guam. His crew

left Kearney, Nebraska, on 11 June 1945 in their aircraft "Late Date" and flew three uneventful legs to Mather Field, Hawaii, and Kwajalein. After landing at Kwajalein, they were surprised to see a small, formal group of people waiting for them at their parking spot.

There was no one around any of the other B-29s being parked. When we completed our check lists and disembarked from the aircraft the group came to attention, gave us a big salute, [and] then the leader stepped forward, introduced himself as the Base Commander, and gave us a reception speech. He welcomed us as being the 1,000th B-29 and crew to deploy through Kwajalein from the U.S. to the Marianas. (48:2)

The crew autographed a softball and put the tail number of their B-29B on it. Capt Mitchell's crew was escorted to the base club and served a steak dinner with cold beer. The autographed softball was placed on a shelf behind the club's bar beside various other trophies. Later, the crew received a number of sharp comments from other newly arrived B-29 crews who were treated less royally to C-rations in the mess hall. The next day, Capt Mitchell's crew left Kwajalein for Guam to join their comrades at Northwest Field.

Chapter Three

THE PACIFIC THEATER

War is hell, but it is double hell in the skies.
Gen Frank Armstrong (38:Jun 45)

THE EARLY MONTHS ON GUAM

By mid-April 1945, ten Army Engineer and Navy Seabee construction battalions were struggling to complete the airstrip at Northwest Field. Construction officials had underestimated the task in early March and assigned three more battalions to supplement the seven already on the job. The engineers worked around-the-clock to change near impenetrable jungle into an airfield that met the special operational requirements of the very heavy B-29 bomber.

Bases to hold B-29s, however, must be constructed with a firm rock base and a paved surface. When a 135,000-pound airplane lands on an airstrip, three feet of compacted rock base are needed to hold it. To operate successfully under combat conditions the Superfortress should have a runway approximately two miles long and 500 feet wide. There must be parking facilities, dozens of miles of taxi space, and hundreds of hardstands, all of which also must be paved. The approaches have to be free of mountains and other obstacles for 15 miles at each end of the runway. And, instead of moving 30,000 cubic yards of earth [for typical European airfields with medium bombers], it is often necessary to move a million cubic yards of ground. (23:13)

The hard coral rock lying beneath the jungle growth dramatically slowed the construction pace. The engineers used dynamite, jack-hammers, and bulldozers to loosen, move, and replace the stubborn coral in a valiant effort to meet the scheduled 1 June operational date for the airfield.

When the wing's first ground echelons arrived at Northwest Field on 14 April 1945, they found very primitive living conditions. The wing had been assigned the last available piece of property on the northwest coast of Guam overlooking a sheer

cliff that dropped to the sea. Bulldozer crews had cleared part of the airfield's living areas from the jungle just prior to their arrival. Consequently, there were no living quarters, mess halls, or bathing facilities. There were only a few latrines blasted out of solid coral and a limited supply of water for drinking or bathing in homemade washstands. (Fig. 26-27) Temporary living quarters consisted of two-man pup tents and bedrolls on the ground. (Fig. 28)

The officers of the [76th ASG] were not so fortunate, for their bedrolls were not unloaded from the ship, and they did not have their tents for the first night. The officers had to improvise their own shelter from raincoats and palm branches. Few of the officers will forget their experience during the first night trying to keep dry in their makeshift shelter during the incessant downpour. (36:Apr 45)

The men ate C-rations during the first week. Later, field ranges were uncrated and used to heat the C-rations. (Fig. 29) The throng of insects, lizards, and huge rats which lived in the nearby trees added to their discomfort.

On their first night on Guam, Privates Harry H. Abernathy and Herbert E. Rowsey were assigned to guard duty and had an uninvited guest. Although Guam had been secured by American forces on 11 August 1944, an unknown number of Japanese soldiers were still hiding on the island in 1945. Thus, Abernathy and Rowsey were picked to patrol the L-shaped area assigned to the 16th Bomb Squadron from midnight to 0200 hours. Although the men were armed with carbines, they had no ammunition. Suddenly, "it sounded like Solomon's Army coming through the jungle." (43:2) Both men quickly fell to the ground, held their flashlights up at arm's length, and shined the light into the jungle searching for the enemy. The beam of light caught two beady eyes nodding from side to side and coming closer and closer. Suddenly, the enemy came into full view, and the men were face to face with a 3-foot lizard. They guessed it was harmless and, with a sigh of relief, returned to their guard duties.

The water supply was the most critical problem at Northwest Field. Although a deep well with a capacity of 800 gallons per minute was located within 2 miles, the Navy held first priority and wouldn't release a pump to the 315th to use the well. Thus, water had to be hauled 47 miles, round trip, by truck from Agana and chlorinated again prior to use. The water was placed in lyster bags* throughout the area for drinking and in 5-gallon cans for bathing and washing. (Fig. 30) "The steel helmet became one of the most important pieces of equipment carried by the men and was used for washing, bathing, and washing clothes." (36:Apr 45) Shower facilities were unavailable for seven days

*Lyster bags were portable waterproof bags used to supply disinfected drinking water.



Figure 26
One of the first buildings at North-
west Field.



Figure 27
Lt Grover C. Walker using
one of the newly built
washstands.



Figure 28
Home sweet home at Northwest Field.



Figure 29
Hot C-rations for two.



Figure 30

Drinking water was stored
in lyster bags.

until the chemical warfare sections converted two large decontamination trucks into shower trucks. The massive water hauling operation created a logistical and maintenance nightmare for transportation personnel who struggled to keep the wing's water supply lines moving.

Local circumstances forced the 315th to construct its own living quarters and office buildings. When the wing's ground echelons arrived, the 1886th and 1887th Engineer Aviation Battalions were the only units available to work on the wing's building facilities. However, these construction units were immediately directed to work on the higher priority Northwest Field airstrip project. Thus, the 315th was tasked to erect its own buildings. Men from the wing headquarters squadron, bomb groups, and service groups were organized into construction crews for locating and erecting the prefabricated barracks and



Figure 31
Laying the foundation for a barracks.



Figure 32
A new barracks; no more tents!

administrative buildings. (Fig. 31) Living quarters and mess halls had the highest priority while quonset huts and frame buildings for offices were put up based on future wing operational requirements. The men worked long days in a tropical climate drastically different than that at the training bases back in the States. Within a few days, the men improved their skills and were soon completing three barracks a day. (Fig. 32)

The 315th's medical staffs did a remarkable job maintaining satisfactory health conditions. Mess, latrine, and other camp sanitary facilities were constantly inspected. The deep latrine pits were oiled twice and burned out once weekly. Pits were constructed for the disposal of waste and laundry water. Preserving perishable food was a major problem in the tropical climate, thus only a 24-hour supply of perishable foods was kept in refrigerators at the mess halls. The mess halls were screened and fly-proofed by spraying with DDT. Pellets of Red Squill, a rat poison, were distributed throughout the area to control rats. Bathing facilities were constructed, and the water purification process was closely monitored. Finally, the medical staffs distributed informative literature on personal hygiene, preventative medicine, and general health safety procedures. Consequently, the only widespread epidemic was an initial outbreak of diarrhea attributed to an overindulgence in coconut milk and an intestinal influenza brought from the ships.

Every special services section strove to improve morale. The three main factors undermining morale were the primitive living conditions, the long work hours in a tropical climate, and the lack of recreational and post exchange facilities. Each special services section used every possible means to overcome these problems.

On the 15th [in the 501st Bomb Group] plans were underway for the construction of a theater and on the 17th of April the theater was in operation. Bomb boxes were acquired from ordnance dumps for seats, a small shack was built for a projection house, and a sheet spread-eagled for a screen. On the 17th of April, a small quantity of PX supplies was purchased for resale to the troops. Several days later a temporary PX was set up and items were purchased on a cash-and-carry basis from the Main Island Exchange. Both the theater and the PX were the first to be established as such in the Wing. (40:Apr 45)

Sports fields for softball, baseball, football, volleyball, basketball, and horse shoes were constructed, and competitive matches were organized. Sunday church services were initially held in the open air until tent chapels were put up. Each Sunday afternoon the men were allowed to swim at the nearby beaches

or to attend boxing bouts at other island installations. (Fig. 34) The task of maintaining morale was difficult because the base construction activities seemed so far removed from supporting combat operations.

In April, Gen LeMay decided the 315th would attack the Japanese oil industry. This industry had barely been scratched because it "was not specified as a top priority objective in the current assigned target list." (7:62) However, Gen LeMay believed Japan's oil industry was in a critical state and should be knocked out. Moreover, he thought the 315th should strike the refineries because they were located on or near the coastline where the 315th's Eagle radar could pick them up effectively.

Our strength was increasing enormously as new units flew in to join us. The 315th was the last to arrive, commanded by that old Eighth Air Force warhorse, Frank Armstrong. Oil targets became the specialty of the 315th. They were the only B-29 wing equipped with the so-called Eagle radar. . . . The Eagle had been designed especially for bombardment, and the 315th had trained especially for night missions. This added up to putting them on oil refineries, oil storage facilities, and even synthetic plants. (9:376)

Lieutenant General Barney Giles, the new Deputy Commander of the Twentieth Air Force, immediately supported Gen LeMay's decision. When queried by Washington, General Carl A. Spaatz, Commander of the U.S. Strategic Forces Europe, also strongly supported the decision because he had seen the German war machine grind to a halt following the strategic bombing campaign against Germany's oil industry. (7:62) In addition, the Strategic Intelligence Section of the Air Staff in Washington concluded that the destruction of the Japanese oil targets would have an immediate effect upon the tactical situation. Thus, Gen LeMay's decision was well supported, and the 315th's first objective in the strategic air war was the destruction of the Japanese oil industry.

As a result, the 315th was put under extreme pressure to perform. Gen LeMay's previous attempts to test selective target bombing using the APQ-13 radar had proved inadequate. Now the 315th, with its highly touted Eagle radar, was given "the opportunity to test again the feasibility of all-weather attack against selected targets and at the same time to make a substantial contribution to the conduct of the war." (7:63) Since Japan's oil industry was practically intact, it provided an excellent target to evaluate the 315th's performance. Thus, the 315th was under the gun to prove its radar bombing accuracy.

Meanwhile, the 509th Composite Group was reassigned from the 315th to the 313th Bomb Wing in April. Prior to the 509th's

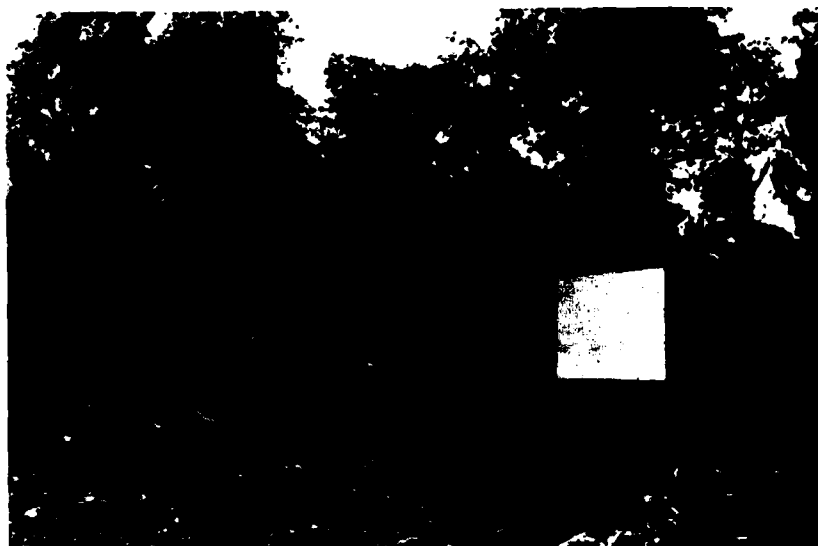


Figure 33
The Coconut Grove theater.



Figure 34
The beach at Tumon Bay.

deployment overseas, Colonel Fitzpatrick, U.S. Army Corps of Engineers, was sent to the Pacific to find an air base suitable for the special needs of the 509th. His search revealed that Tinian provided the ideal combination of security, runway length, and a remote area to construct an ordnance facility to handle the atomic bomb. In addition, a Naval Seabee unit was available to provide construction support. Since these factors negated basing the 509th with the 315th at Guam, the 509th was assigned to the 313th Bomb Wing at Tinian.

Moreover, the Twentieth Air Force was also reorganized in April. The four bomb groups assigned to the XX Bomber Command in the China-Burma-India theater were transferred to the XXI Bomber Command and based on Tinian. (14:336) However, the headquarters for Twentieth Air Force remained in Washington, D.C.

On 11 and 12 May, the 315th's remaining ground echelons arrived at Northwest Field and found the living conditions somewhat better than their predecessors had in April. The 24th and 75th Air Service Groups arrived on 11 May, and all personnel, except the 581st and 587th Engineering Squadrons, were assigned to quarters on the southern side of the airstrip. The 581st and 587th were assigned to the less developed northern side of the airstrip along with the 331st and 502nd Bomb Groups' ground echelons which arrived the following day. (Appendix 7) Two-man wall tents and latrines were ready and waiting. Showers were available although water was still in short supply and strictly rationed. The men dined on C-rations because their mess halls were still a week from completion. Fortunately, mail was distributed in the evening, and it helped the men temporarily forget about the long sea voyage and conditions at Northwest Field.

The 315th's eight photographic units were consolidated into one organization after their arrival at Northwest Field. Prior to deployment, each bomb group and service group had its own photographic section operating independently of the wing and each other. The 315th's photographic officers believed this system would prove inadequate under operational conditions particularly if the separate units were widely scattered at Northwest Field. Thus, during the voyage to Guam, photographic officers from the wing headquarters and the 16th and 501st Bomb Groups proposed a plan to consolidate all photographic units into one organization to meet the operational needs of the wing. These plans were implemented immediately at Northwest Field with the construction of an H-shaped wing photo lab near the wing headquarters building. However, the photographic units weren't the only units to be consolidated.

The wing's four service groups were the victims of a B-29 base reorganization plan initiated by XXI Bomber Command. The plan originated to deal with the unique wing basing system and

logistical shortages in the Pacific theater. Due to the limited land mass available in the Marianas, individual wing bases were established to house over 12,000 men and to provide facilities for over 180 B-29s. (10:3) The wing headquarters was established as the dominant operating entity responsible for the tactical, logistical, and maintenance activities of the four combat groups and four service groups at its base. Naturally, the massive buildup of B-29 forces in the Pacific led to critical shortages of manpower, equipment, and supplies, and it became necessary to economize operations. Thus, each wing was directed to combine the supply and maintenance functions of its separate service groups to form centralized wing functions. This meant the integrity of the service groups was sacrificed for economy and efficiency to meet wing requirements.

As a result, the 315th's four air service groups (ASG) began to consolidate their activities in April and May to form a single wing service center. The 315th Wing Headquarters directed the ASGs to consolidate their respective sections along functional lines to conserve manpower and improve efficiency in support of wing operations.

Suffice to say, it was very detrimental to the morale of the officers and men who had worked and trained hard with their friends and associates. Immediately, we had four of everything: commanders, adjutants, personnel staff, enlisted sections chiefs, etc. In some cases, men were selected as assistants to someone junior to them. Also, some were assigned as assistants to assistants. This also resulted in a surplus of officers and men in some departments, so many of them were called upon to perform tasks far removed from their military specialty. Morale was at a low ebb. (35:May 45)

Col Neyer, the 75th ASG Commander, was the senior ASG officer and assumed command of the wing service center. He immediately initiated a series of administrative actions to implement the reorganization guidance.

The 315th planned to incorporate a unique visual display technique into the wing briefing room at Northwest Field. Prior to deployment overseas, the 315th Headquarter's air echelon at Peterson Field had initiated a project to find a better means of presenting briefing data to flight crews. Current briefing systems relied on poor quality visual projection machines such as the Baloptican and Epidiascope. Thus, the air echelon began an extensive series of tests with phosphorescent and luminiscent paints and ultraviolet light.

Using these materials, it was found that the briefing personnel could project pictures, maps, radarscope

photographs and charts so clearly that crews could gain a more rapid and lasting understanding. Specific points of interest could be emphasized in more prominent relief through the use of different colors. Another method involved the employment of paints which are invisible under ordinary electric light, but which appear quite prominently under ultraviolet illumination. (38:May 45)

The results of these tests were submitted to Higher Headquarters, and the 315th was granted permission to use the new method overseas. Thus, the wing briefing room's interior was designed to display large data boards utilizing the new illuminated briefing technique.

Six radarscope photographic missions were flown in May. Radarscope photography was a new development using a special camera, the O-5, attached to the Eagle's radar machinery to record the images displayed on the radarscope. The radarscope film was used for crew briefings and to help operational planners. The missions in May were flown to obtain radarscope film for later use by the 315th in combat mission planning and to provide training materials for the flight crews still in the States. The first mission was flown on 5-6 May by Capt Howard's crew in the "Ellie Barbara and Her Orphans." The crew took off from North Field, Guam, where they had been temporarily attached to the 314th Bomb Wing pending completion of Northwest Field's runways. The mission was flown over the Kawasaki Aircraft Plant near Nagoya on the main island of Japan. The crew encountered no flak, but a Japanese fighter trailed the B-29B for 100 miles out to sea. Capt Howard's crew flew five more missions during May to Kobe, Osaka, Tokyo, Yokohama, and Tamashima. Col Gurney, the 16th Group Commander, flew with Capt Howard's crew on the 31 May mission to Tamashima. Most missions were flown at 15,000 feet and the radarscope photographs obtained ranged in quality from good to excellent.

Maj Tintensor's crew and aircraft, "Roadapple," were lost on the 8 May radarscope mission to Kobe. The crew were members of the 21st Bomb Squadron, 501st Bomb Group. They took off from North Field with Capt Howard's crew on the daylight mission but failed to return. The reason for the loss of the five officer, five enlisted man crew was unknown. However, Capt Howard's crew suspected aircraft icing as a possible cause since they had also experienced difficulty with icing on their aircraft.

On Sunday, 24 May 1945, the 502nd Bomb Group conducted a special flag-raising ceremony. The unofficial ceremony began at 0630 hours when the men were marched to the main square of the group's ground echelon area. Around them stood rows of two-man tents erected earlier in the week as their temporary homes on Guam. Four group officers presented an American flag to Colonel Joyce, commander of the ground echelon, who ordered the raising

of the nation's colors. First Lieutenant Godsell, Group Special Services Officer, led the entire group in singing the National Anthem as the American flag fluttered in the morning breeze. This ceremony occurred six weeks after the 502nd's ground echelon left Grand Island, Nebraska, and marked the end of their period of initiation on Guam. The group was ready to begin constructing its permanent home and preparing for full-scale combat operations at Northwest Field.

Later that day, four enlisted men from the 485th Bomb Squadron, 502nd Bomb Group, were involved in a tragic accident. The accident occurred around 1900 hours as the men were proceeding toward the Northwest Field housing area. Along their route of travel, a bulldozer had previously punctured an aviation gas pipeline on the side of the road causing gas to be sprayed onto the roadway. When the weapons carrier carrying the men entered the affected area, the gasoline fumes ignited and all four men were seriously burned.

As a result of [their] burns, Pfc McCarty died at 2357 hours on 24 May 1945; Pvt Barna died at 0300 hours, 25 May 1945; Pfc Lantosh died at 2300, 25 May 1945; and Pfc Phillips died at 1500, 26 May 1945. Pfc Phillips was buried at Military Cemetery number two, Guam, on 17 May 1945. Pfc's McCarty and Lantosh and Pvt Barna were buried in the same cemetery on 26 May 1945. (41:May 45)

The loss of these men reminded their comrades of the dangers of fighting a war, regardless of one's location in the combat zone.

The 315th Wing Headquarter's air echelon arrived on Guam between 20 and 28 May. The air echelon came in small groups aboard a stream of 315th B-29Bs. Gen Armstrong arrived on 28 May in his own B-29B, the "Fluffy Fuz III," built especially for him by the Bell-Marietta Company in Georgia. The "Fluffy Fuz III" had the normal B-29B modifications plus fuel-injection engines and reversible propellers which allowed the aircraft to use only half of the runway when it landed on Guam. The next day, 29 May 1945, Gen Armstrong assumed command of the 315th Wing Headquarters at Northwest Field.

On 1 June, a formal dedication ceremony for Northwest Field was held on the south runway. Gen Armstrong circled the field in his "Fluffy Fuz III" to begin the ceremony and landed on the newly completed south runway. He taxied the aircraft and parked facing the distinguished visitors' ceremonial platform while hundreds of men from various military services responded with thunderous applause and cheers.

On the speakers' platform with the Naval executive [Admiral of the Fleet Chester W. Nimitz] were: Lt Gen Barney M. Giles, commanding the Army Air Forces in the

Pacific Ocean Areas; Maj Gen Curtis E. LeMay, Commanding General of the XXI Bomber Command; Maj Gen Henry L. Larson of the Marines, the Island Commander; Brig Gen Frank A. Armstrong Jr., Commanding General of the 315th Wing; and Col Lee B. Washburn, Commanding Officer of the 933rd Engineer Aviation Regiment, the construction director. (38:Jun 45)

The distinguished speakers highlighted the significance of the event in the brief but impressive ceremony. Admiral Nimitz, the honored guest for the occasion, made the opening ceremonial remarks. He commended the aviation engineer and naval construction battalions for their superhuman efforts to build Northwest Field. He also stressed the connection between the mission of the troops on Guam to the total war effort in the Pacific. Col Washburn spoke next and declared Northwest Field operational. Gen Armstrong promised a fine flying tradition and excellent results from the 315th's future combat operations out of Northwest Field. Gen Larson spoke of the "unity of command and purpose" in this construction project and concluded by saying Northwest Field was a "milestone in the march to Tokyo." (38:Jun 45) Finally, Lt Gen Giles also commended the engineers and revealed that certain ranking Japanese engineers had told the Japanese Imperial Command that insurmountable terrain problems would never permit American B-29 forces to operate out of the Marianas. Gen Giles then wondered what these Japanese engineers would say after the upcoming B-29 Superfort raids.

In early June, First Lieutenant Wesley Rhodenhamel, 15th Bomb Squadron radar navigator, made a special deal with some Navy Seabees to improve his standard of living. The Seabees came to Northwest Field trying to trade fake war souvenirs for booze. The men in Lt Rhodenhamel's quonset hut weren't interested, but he offered 4 quarts of booze for a refrigerator--a luxury item found only at the mess halls. Although the two parties agreed on 6 quarts, Lt Rhodenhamel didn't expect the Seabees would deliver. Two days later around 0300 hours, four Seabees backed a truck up to the rear of his quonset, unloaded a refrigerator, and demanded 8 quarts of booze. They settled for 7. The refrigerator was promptly plugged in, stocked with warm beer, and temporarily hidden with a sheet. Before daylight the refrigerator was enclosed in two modified 500-pound bomb crates and resembled the other similarly constructed clothes closets in the quonset. Later in the day, Lt Rhodenhamel and a quonset-mate drove to the Navy base at Agana and bought enough fresh lettuce, tomatoes, and cans of Navy ham to make sandwiches for awhile. They also bought a hot plate for only one bottle of booze and set out to procure bread from the mess halls even though this was strictly forbidden by posted official notices. Two days later, notices were posted all over Guam requesting information from anyone "knowing the whereabouts of Admiral Nimitz' refrigerator." (49:2) The men in Lt Rhodenhamel's quonset knew they were in trouble if their tough-minded Squadron

Commander, Lieutenant Colonel Richard Kline, ever found out. Consequently, they were extremely cautious thereafter when they drank their cold beer and ate their sandwiches. While they secretly thanked Admiral Nimitz for the refrigerator, the wing was also preparing to formally thank him for his help in other areas.

On 14 June, the 315th held a special dedication ceremony at Northwest Field to honor Admiral Nimitz. Gen Armstrong wanted the 315th to give special recognition and tribute to Admiral Nimitz and all the naval personnel who had given so much logistical support to build Northwest Field's airstrip. Therefore, the 315th readied a B-29B, named it the "Fleet Admiral Nimitz," and dedicated it to Admiral Nimitz at 1700 hours on Northwest Field's south taxi strip. General H. H. Arnold, who was in the area on an inspection tour, was the keynote speaker for the ceremony. In his remarks, Gen Arnold referred to the dedicated B-29B as a "distinct manifestation of the gratitude and admiration of the 315th Wing and the entire Air Force for Admiral Nimitz." (38:Jun 45) Gen Arnold added that Japan would soon feel the weight of what the name Nimitz meant when the aircraft began its combat missions against the Empire. In response, Admiral Nimitz expressed his honor and gratitude for the special christening.

After the official ceremony, Admiral Nimitz and Gen Arnold inspected the "Fleet Admiral Nimitz." They were introduced to Col Hubbard, the aircraft commander and 501st Bomb Group Commander, and his crew. (Fig. 35) Next, Admiral Nimitz and Gen Arnold toured the aircraft, and the crew described their respective duties and the aircraft's outstanding features. (Fig. 36) Before departing, Admiral Nimitz "presented Hubbard with a five-star insignia to put in the upholstery, a case of beer, and a bottle of Haig and Haig for the crew to celebrate with later." (2:271) In an expression of good luck, Admiral Nimitz later sent an autographed portrait to the crew members of the "Fleet Admiral Nimitz." The good luck gesture was well timed because the crews were busy training for their first combat mission.

The 315th's flight crews had to complete several weeks of theater indoctrination training before they could fly missions over the Japanese Empire. The training included two days of ground school, two orientation flights, and two shakedown missions required by a special XXI Bomber Command directive. Ground training included target study, air-sea rescue procedures, and tactical doctrine. The local orientation flights prepared crews for operations out of Guam. The two shakedown mission targets assigned to the 315th were Truk and Farajon de Pajaros. Truk, a major Japanese stronghold in the Eastern Carolines Islands by-passed by advancing American forces, still had Japanese forces on it and provided an excellent training target. Pajaros was a totally uninhabited and militarily unoccupied



Figure 35
Col Hubbard (center) introduces his crew to Admiral Nimitz.



Figure 36

Admiral Nimitz took in the view from the cockpit of his namesake B-29B.

island in the Marianas used for bombing practice. The shake-down training included a trip to Iwo Jima, a small but vital B-29 emergency airfield secured at a high human cost by American Marines.

The first of seven shakedown missions for the 16th and 501st Groups in June was flown on the night of 16 June. Gen Armstrong attended the pre-mission briefing. He welcomed the crews to the combat area and congratulated them on the start of their combat careers. He warned them that "war is hell, but it is double hell in the skies." (38:Jun 45) He also urged caution until they gained combat experience. Twenty-six crews flew the first practice bombing mission to Moen Island, Truk, and the mission was successful. The two groups flew six more shakedown missions on 21, 23, 25, 27, 28, and 30 June to Moen Island and Pajaros. Although there were no losses due to enemy action, one B-29B crashed during landing following the 28 June mission to Truk. Fortunately, the crew survived the accident.

The flight crews practiced their defensive measures on these relatively safe shakedown missions. They were authorized to go to full power and top speed in their B-29Bs to evade enemy fighters, searchlights, and flak. In addition, pieces of aluminum foil, or "rope," were also ejected over the target area to confuse enemy radar-controlled searchlights. If the rope was dropped too late, the aircraft could be lit up, or "coned," by the searchlights, and the antiaircraft batteries could zero-in for the kill. Finally, the crews depended on the APG-15 tail turret guns as their only defensive firepower against fighter attacks. Despite these defensive measures, the 315th's crews were excellent targets in their lightly armed Superforts flying in a single-ship stream over the target.

While some crews were flying shakedown missions in June, other crews were flying radarscope photography missions. Usually one or two aircraft were sent on these missions to obtain radar film of Japanese oil industry targets. During the month, "such priority strategic sites as the Utsube River Oil Refinery, the Kawasaki Petroleum plant near Yokohama, the Ube Coal Liquefaction works at Kudamatsu, the Maruzen refineries and others were photographed extensively." (38:June 45) The wing's operational planners analyzed the radarscope film for the wing's upcoming strikes against Japan's oil refineries. These missions also helped the radar and photo technicians to eliminate any remaining discrepancies in the radar and camera equipment. However, these weren't the only last minute preparations for the wing's first combat strike.

A new air-sea rescue (ASR) system was implemented during June. Under this system, an LCI (landing craft, infantry) would patrol the shoreline of the island just off the runways when the Superforts started their Empire missions. In addition, a Dumbo (rescue aircraft) would cruise over the shoreline area to direct the LCI to any aircraft and crew in distress. Subsequently, the flight crews were required to practice ditching drills using this new ASR system. Each crew was taken a few miles out to sea in an LCI and tossed overboard with only a Mae West (life vest) for floatation. Shortly thereafter, a Dumbo dropped a rubber raft to the crew who inflated the raft and then used a signaling mirror to contact the Dumbo. The Dumbo contacted the LCI and directed it to pickup the crew. This local ASR system was part of an elaborate system set up in the Pacific using submarines, destroyers, and long-range patrol search planes to support downed aircrews. Although the flight crews hoped they would never have to use the ASR system, it was reassuring to know it was there as they crossed the vast Pacific.

On 18 June, a large service center theater was dedicated and named "El Gecko." The theater's name, El Gecko, was the Guamanian name for a common, harmless lizard on the island. The dedication ceremony capped many hours of voluntary off-duty

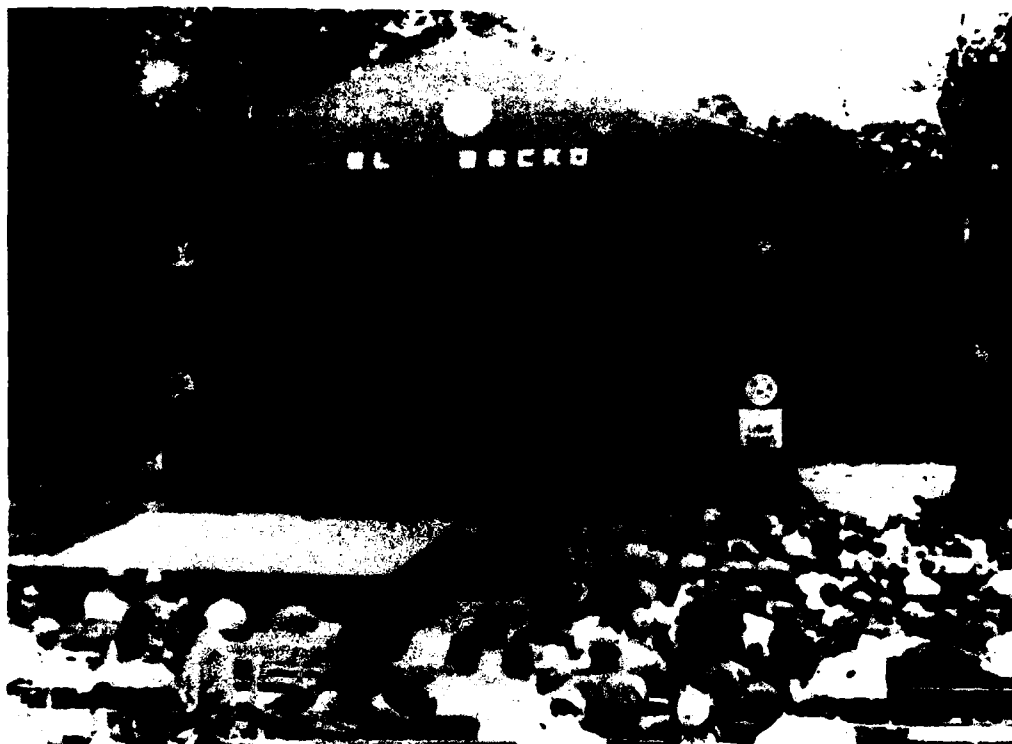


Figure 37
The El Gecko theater.

labor performed mainly by service group personnel. Navy Seabees and Army Engineers supported the effort by bulldozing and terracing the building site. A large stage, 40 feet by 90 feet, was built to attract live entertainment to the 315th's part of the island. Theater-like seats were constructed from discarded wooden bomb crates. The huge outdoor amphitheater had a seating capacity of over 5,000 and provided an excellent facility for presenting live stage shows and movies. (Fig. 37) The El Gecko theater was one of the finest entertainment facilities on the island, but it wasn't the only source of recreation.

In June, five enlisted men went searching for war souvenirs and found more than they wanted--some were still alive. Initially, Harry H. Abernathy, Harry J. Edwards, John C. Hockaday, Charles E. Ohse, and Cecil G. Westberg were lucky and found a Japanese skeleton and a broken trench shovel in the jungle. They continued their search through a coconut grove where the surrounding savannah grass was head high.

About that time three Japs jumped across the trail and we could see the rifles and the hand grenades they were carrying. I [Abernathy] do not know who was the more frightened--the Japs or us. Anyway, Hockaday and Westberg wanted to fight them barehanded, and Edwards and I said it was time to return for supper. This was about 3 PM and we both knew supper was not ready until several hours later. About that time, Edwards, Ohse, and I started to run, and a bang came from somewhere and Westberg and Hockaday ceased yelling to come out and fight barehanded and ran with us. I do not know if any other men of the 16th Sq, 16th Gp ran from the enemy, but we five certainly did. (43:2)

Encounters such as this were rare since the Japanese soldiers preferred to hide in the jungle, and many of the men in the 315th weren't as adventurous. Fortunately, these men escaped with a lifelong war memory and didn't become the enemy's war souvenirs.

On Saturday, 23 June 1945, the 331st and 502nd Bomb Group Commanders arrived at Northwest Field. The aircraft bearing Col James Peyton, the 331st Commander, was greeted by four jeep loads of men led by Lieutenant Colonel George B. Mackay, commanding officer of the group's ground echelon.

An airman dropped through the plane's nose wheel well, flashed a grin at the welcoming committee, greeted Lt Col Mackay, 'George, that ocean's big!' Col James N. 'Big Jim' Peyton, Commanding Officer of the 331st Bombardment Group, had arrived. With him--6,000 miles and 28 Superfortress hours from the U.S.--was the group's first combat crew to reach the unit's operational base, a 356th Squadron crew led by Captain Julius H. Baughn. (39:Jun 45)

That same day, a plane piloted by Col Kenneth O. Sanborn, the 502nd Commander, touched down on the south runway. A few minutes later, Col Joyce welcomed Col Sanborn, Major Ronald Johnson (502nd Group Technical Inspector), and Captain Dillingham's flight crew to Northwest Field. (Fig. 38) The ground and air echelons of both bomb groups were glad to finally be reunited.

The 315th wing staff gave construction priority to Service Center G during June. Service Center G was located on the southern side of the Northwest Field airstrip and was the designated operations area for the 16th and 501st Bomb Groups. The 331st and 502nd Bomb Groups were scheduled to use Service Center H following its construction on the northern side of the airstrip. Since the 16th and 501st were scheduled to become operational first, the large (74 structures) Service Center G complex



Figure 38

Col Joyce (left) welcomed Col Sanborn to Northwest Field.



Figure 39

315th Wing Headquarters, June 1945.



Figure 40
Wing briefing room.

received the highest construction priority. By the end of June, 68 of the 74 structures were finished with the remaining 6 nearly completed. In contrast, none of the 54 structures planned for Service Center H were begun in June.

Several of the 315th's key facilities were completed just in time for the wing's first combat mission. The wing briefing room was finished, and its walls were lined with large panels to provide aircrews with the latest information on target statistics, flak defenses, escape and evasion, and strike and reconnaissance photographs. (Fig. 40) The control room in the new communications building was the central operations communications point for the wing and had enlarged panel boards to show aircraft status, weather data, crew availability, and pertinent flight statistics. The photo lab personnel had radar photographs ready for the pre-strike briefings and were standing by to process post-mission radarscope film to analyze bombing damage. The permanent control tower replaced the temporary one built in May, and the tower personnel were anxious to launch the wing's aircraft on the first combat strike.

FIFTEEN MISSIONS OIL

On 26 June, the 315th was charged with excitement as the wing prepared for its first mission against Japan's home islands. The field order specified a maximum wing effort against the Utsube River Oil Refinery at Yokkaichi. Every man was anxious to show what the 315th could do, and each flight crew member keenly felt the anxiety and tension of the occasion.

The Commanding General reflected this attitude at the briefing for that first mission. In tones of understatement that underlined his emphasis, General Armstrong declared, 'The 315th Bomb Wing is making history today. If this mission is successful, this raid will revolutionize aerial bombardment.' And every last man voiced an inward thought that he would do his best and then some if necessary to make it a success. (38:June 45)

The many months of training, organization, inconvenience, and planning were about to be tested in combat.

The pre-takeoff briefing was thorough. The operations officer briefed the mission using the 315th's special illuminated briefing technique. A night attack was planned to permit daylight takeoffs and landings as well as to compensate for the 315th's lightly armed B-29Bs. A 28-mile synchronous radar bombing run was planned at 15,000-16,000 feet in compliance with the tactics established by Gen LeMay's XXI Bomber Command. The mission's routing passed Iwo Jima before and after the strike and provided an emergency landing field, if needed. (Fig. 41) The intelligence officer described the enemy's defenses, and the weather officer gave the mission forecast. The crews then conducted their specialized briefing and reviewed the mission profile, route check points, and radarscope photographs of the target. Everything was ready for Empire Mission 1. (Fig. 42-44)

Precisely at 1700 hours, Gen Armstrong started his takeoff roll in the "Fluffy Fuz III" to lead the mission. (Fig. 45) Thirty-four B-29Bs from the 16th and 501st Bomb Groups followed him down the south runway at 1-minute takeoff intervals. Col Gurney led the 16th's 15 B-29Bs while Col Hubbard, in the "Fleet Admiral Nimitz," led 19 from the 501st. On takeoff the Superforts' engines became extremely hot as they strained to lift the bomb-laden planes into the tropical air. The crews found the sheer cliff at the end of the south runway was well suited for B-29 operations, and they dropped down to just above the water to let the cooler air reduce the engine temperature before starting their climb. However, one 501st crew still had to turn back with engine trouble. Just prior to landfall at

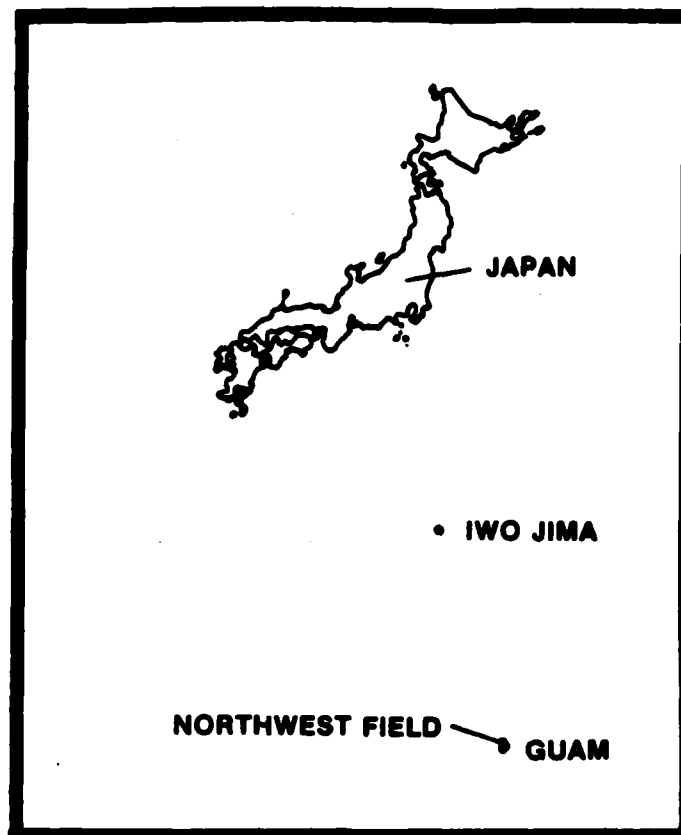


Figure 41

Iwo Jima provided an important mission check point and an emergency airfield for B-29 crews.

Japan, First Lieutenant Davis, 501st Bomb Group, also had an engine fail. Undeterred, he altered heading to complete a three-engine bombing attack against a target of opportunity at Kagata. The remaining 33 Superforts headed for the Utsube plant.

As the crews started their bomb run, the weather conditions were ideal for radar bombing. The sky below was totally overcast and blinded the enemy's ground defenses. The APQ-7 Eagle radar easily penetrated the cloud cover and located the target at the mouth of the Utsube River two miles south of Yokkaichi. One Japanese fighter with its running lights on made a pass at Col Gurney's aircraft but didn't fire a shot. Approaching the target, the antiaircraft fire was meager and inaccurate. The 33 Superforts crossed the target in a steady, single-file stream and dropped 223 tons of bombs on Utsube. After crossing the



Figure 42
16th Group B-29Bs ready for Empire Mission 1.



Figure 43
Gen Armstrong ready to
lead Empire Mission 1.



Figure 44
315th crews ready for Empire Mission 1.



Figure 45

Gen Armstrong launched at 1700 hours, 26 June 1945.

target, each crew turned sharply to change course, called a "breakaway," and headed homeward.

Two minutes after breakaway, the crew of the "Moldy Fig" nearly collided with another Superfort. First Lieutenant Ray J. Blaskey, the bombardier, spotted another B-29B about 100 feet away and yelled for the pilot, Lt Leonard D. Jones, to dive to avoid a collision. The left scanner had been dispensing rope at the time and was thrown halfway through the camera hatch by the violent maneuver. Moments later the right scanner was knocked out briefly when he stepped into a hole and fell to the floor while trying to go rescue the left scanner. The right scanner quickly recovered and pulled the left scanner out of the hatch. The scanners administered first aid to each other and were all right. The crew of the "Moldy Fig" never discovered who they almost hit that night, or who was at fault in the near collision.

The 315th's first mission had mixed results. On the positive side, the wing completed its first mission and proved it was operational. There were no major injuries, and only one plane received minor damage to the right rear bomb-bay door. One 16th Bomb Group B-29B, commanded by First Lieutenant Whitted, ran low on fuel and landed at Iwo Jima. The remaining aircraft returned safely to Northwest Field, including Lt Davis who flew all the way back to Guam with only three engines oper-

ating. On the negative side, the target was only partially destroyed. "Reconnaissance photos disclosed that 539,330 feet, or 30 percent, of the roof area was destroyed or damaged as a result of this mission. Many of the vital portions of the refinery were hit and seriously damaged." (37:4) However, the refinery had not been knocked out, and another mission was needed to complete the job.

The 315th's first Empire mission highlighted the unique distance and weather problems complicating the strategic air campaign against Japan. First, the one-way distance from Guam to the Japanese mainland was more than 1,450 miles, or twice the distance for bombing missions in Europe. Secondly, Japan was situated between the continent of Asia and the broad Pacific Ocean and subject to unusual weather conditions. "Invariably, there were stacks of deep-bellied, stagnant clouds. Winds over Tokyo at high altitude probably were the strongest and most conflicting in the world." (6:201) The high winds aloft over Japan were erratic in direction and generally from 100 to 175 miles per hour in velocity. (10:27) These unusual winds drastically complicated the bombardier's task of lining up for the target and compensating for excessively high or slow ground speeds. Bombing accuracy also suffered because the winds adversely affected the flight path of bombs falling to the target. Finally, the weather enroute to Japan over the vast stretch of water was frequently characterized by towering, powerful thunderstorms. However, "The Superfortress Supermen shrugged at the weather and drove their ships through the fronts to drop bombs either visually or by radar." (3:9)

To deal with the unusual weather over the target, Gen Armstrong decided to modify the bomb run procedure for Empire Mission 2. He planned to send an aircraft to the target a few minutes ahead of the wing's main force to broadcast wind drift information. The remaining crews could then apply sufficient corrections during the bomb run to compensate for the rapidly changing wind conditions, thereby improving bombing accuracy. Since the wind run aircraft would also drop bombs, Col Hubbard took the assignment for this mission.

On 29-30 June, the 315th launched 36 B-29Bs to attack the Nippon Oil Company's plant at Kudamatsu. The Kudamatsu plant was one of the largest petroleum producers in Japan. Superforts from the 16th and 501st Groups launched in separate waves starting at 1811 hours using 45-second takeoff intervals. Shortly after takeoff, a 16th crew experienced engine trouble, jettisoned their bombs, and returned to Guam escorted by another B-29B. Meanwhile, the 501st, as the lead group, slowly climbed to 8,000 feet while the 16th continued to 10,000 feet. One hundred miles prior to landfall at Japan, two more 501st crews had engine failures and terminated the mission. The remaining 32 Superforts climbed through a weather front to 15,000 feet and started their radar bombing run.



Figure 46

This 315th crew returned safely to Northwest Field.

For the second time, the weather at the target was ideal to test radar bombing. A solid overcast hid the Kudamatsu refinery located west-southwest of Kure on the coast of Honshu Island. Col Hubbard's crew flew ahead and reported a strong wind shift during their bomb run. Meanwhile, 17 enemy fighters approached the main wing force and began flying a parallel course as close as 50 feet. Since the fighters didn't attack, they may have been getting altitude checks for the antiaircraft batteries below. However, enemy flak activity was light. The crews used 1-minute bombing intervals and dropped 209 tons of 500-pound General Purpose (GP) bombs on Kudamatsu. All aircraft returned safely to Northwest Field and completed the mission with an average flying time of 14 hours and 56 minutes. (Fig. 46)

The bombing results for Empire Mission 2 were similar to the first mission. Photo-reconnaissance showed the Kudamatsu plant sustained only 5 percent total damage with a 45,000 square foot refining unit and several small storage tanks and buildings totally destroyed. The bomb impact pattern was to the right and long with the Haitachi Manufacturing Company, a locomotive factory located adjacent to the Kudamatsu plant, approximately 40 percent destroyed by bombs falling beyond the briefed target. Although the bombing results for the first two missions were

commanders opposed the longer bombing run and compressibility plans because of factors unknown and concern for the safety of their men. Gen Armstrong listened to all the objections, but supported the plan by stating, "That's the way it will be." (45:3) Consequently, the groups prepared to use Capt Leasure's procedure on the next Empire mission.

Meanwhile, Lt Rhodenhamel had to reveal the existence of his secret refrigerator to the 16th Bomb Group commander. Following Empire Mission 2, Lt Rhodenhamel had taken bread from the mess hall and had to pass by Col Sam Gurney on the way to his quonset hut. Col Gurney said nothing, but within an hour he paid a visit to Lt Rhodenhamel's quonset and asked about the bread. Lt Rhodenhamel confessed he had taken the bread and then promptly offered Col Gurney a cold beer and a sandwich. Col Gurney was surprised to see the refrigerator, but sat down and enjoyed the hearty snack. From then on, Lt Col Richard Kline, the 15th Squadron Commander, was always interested in why the 16th Group Commander was such a frequent visitor to Lt Rhodenhamel's quonset.

Morale in the 315th improved dramatically in June. Living conditions were substantially better with prefabricated housing construction nearly completed and some of the permanent mess halls opened. The 16th and 331st Bomb Groups' newspapers, El Gecko and The Target, respectively, made their debut at Northwest Field in June. (Appendix 8) The 502nd's Special Services Section installed an ice cream machine and began making ice cream for the entire group on Sundays. The inauguration ceremony for the El Gecko theater was followed by several live shows and nightly movies. On 28 June, the wing announced the installation of a new mail facility to improve mail services. A long list of eagerly awaited promotions was released at the end of the month. However, the biggest boost to morale was the reuniting of the wing's ground and air echelons and the start of combat operations against Japan.

By the end of June, Northwest Field's airstrip was nearly finished. The south runway and service aprons were operational. The north runway was two-thirds finished and forecasted to be operational in early July. Most of the grading work on the north runway's taxi strips was completed and readied for hard surfacing in July. The wing needed the north runway and service strips completed to expedite the launching of its rapidly growing B-29B force.

On 2-3 July, Col Hubbard led Empire Mission 3 against the Maruzen Oil Refinery at Shimotsu. The plant was not only a major producer of aviation gasoline, lube oil, ordinary gasoline, and fuel oil, but it also had extensive oil storage facilities for the Japanese Navy. The wing launched 40 aircraft and 39 dropped their 500-pound GP bombs on the Maruzen refinery. The returning aircrews reported columns of smoke rising to 10,000

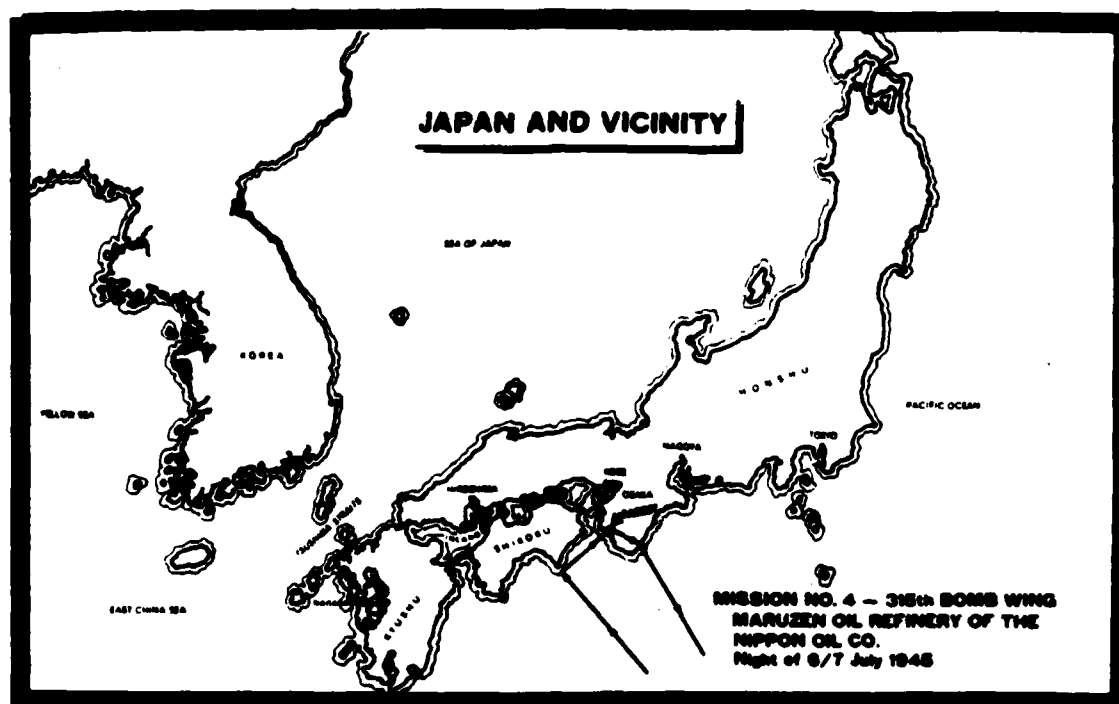


Figure 48
The Maruzen mission.

feet and thought they had leveled the target. However, reconnaissance photos showed only 5 percent of the plant was destroyed. Consequently, a follow-up strike was scheduled for the night of 6-7 July. (Fig. 48)

On Empire Mission 4, Col Hubbard led a force of 60 Superforts to restrike Maruzen. Col Gurney led the 16th Bomb Group's element of 31 B-29Bs. As the B-29Bs approached Japan at 10,000-11,000 feet, 34 enemy fighters jumped them and made several attacks seeming to try to ram the Superforts. Col Hubbard's crew flew ahead to bomb the target and to broadcast the wind data to the remaining wing force.

In the nose, the Norden bombsight indicators came together. Hubbard's red light flashed, indicating the bomb bay doors had snapped open. 'Bombs away!' came the cry and the aircraft lifted as 10 tons of bombs headed for Maruzen. Hubbard swung right and down away from the target. His copilot, Major Gregory Hathaway, got the best view because he was on the inside of the turn as explosions erupted below and lit up the clouds. 'We've hit pay dirt!' Greg shouted. 'Of all the crap I've taken since I've been in the Army, it's paid off tonight.' (12:236) (Fig. 49)



Figure 49

Col Hubbard's crew leaves Maruzen in flames.

Minutes later, 58 other Superfort crews located the target on radar, dropped their lethal bomb loads, and turned homeward leaving Maruzen engulfed in flames. (Fig. 50-51)

The reconnaissance photos for the Maruzen mission proved its success. (Fig. 52-53) Photo analysis experts at XXI Bomber Command reported the Maruzen Oil Refinery was totally destroyed. Gen LeMay's staff concluded that a force of 117 non-Eagle equipped B-29s would have been required to produce the same results as the 315th's smaller Eagle radar force. Gen LeMay was so impressed he sent a congratulatory message to the 315th.

Successful strike is subject. I have just reviewed the post-strike photography of your strike on target 1764, the MARUZEN Oil Refinery at SHIMOTSU, the night of 6/7 July. With a half-Wing effort you achieved ninety-five percent destruction, definitely establishing the ability of your crews with the APQ-7 to hit and destroy precision targets, operating at night. This performance is the most successful radar bombing of the Command to date. Congratulations to you and your men. (7:63) (Appendix 9)



Figure 50
The target for Empire Mission 4.

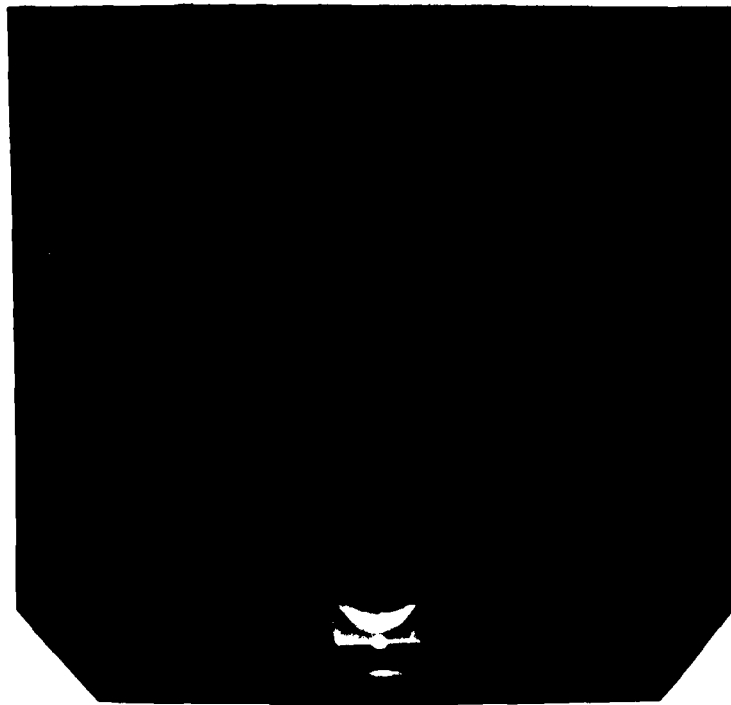


Figure 51
Radarscope picture of Maruzen target.



Figure 52
Pre-strike photo of Maruzen.

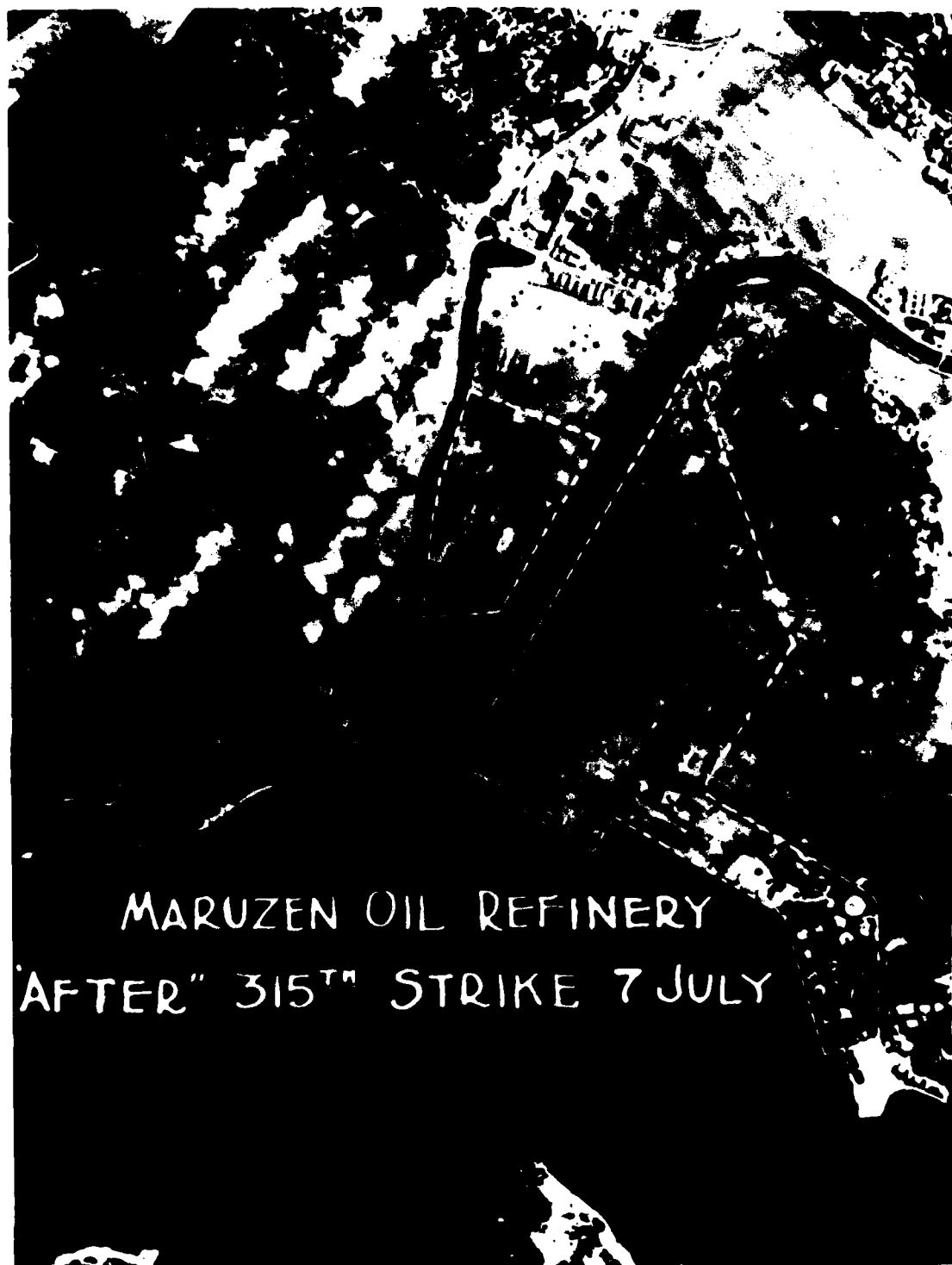


Figure 53
Maruzen was 95 percent destroyed.

Gen LeMay's praise reinforced the growing self-confidence and pride each man in the 315th had in his unit and its combat abilities. Thus, they were eager to repeat their accurate bombing performance on the next mission. Coincidentally, a new wing program was ready to ensure they would.

A radar operator training program was started to correct deficiencies noted in the first few Empire missions. Major problem areas identified included wind drift corrections for the bomb run, coordination between radar operators and bombardiers, and radar identification of landfall points. Training classes that included thorough radar film analysis were started to correct these problems and improve mission planning. In addition, a mockup of the APQ-7 was built so radar operators could practice inflight maintenance procedures.

While early radar operators were poorly trained, those in the 315th had the best training of all. Pre-mission briefings were so thorough that operators had to spend hours going over radar briefing material, including scope-reconnaissance photos of the target, and they had to prove they could draw the details of the target from memory. (12:237)

The training program was used to increase the radar bombing accuracy of crews already in combat and as a means to share their experiences with the newly arrived crews.

The 315th also implemented a new altimeter setting procedure to improve aircraft compressibility over the target. Altitude separation was a crucial factor for safely compressing aircraft over the heavily defended targets. Different methods of coordinating altimeter settings at mission takeoff briefings had been tried but proved lacking. Finally, the 315th's crews tried an altimeter setting of 29.92 inches (barometric)* for the entire flight except for takeoff and landing. This method proved highly successful and became the standard operating procedure for the wing's aircrews.

For Empire Mission 5, the 315th revisited the Utsube River Oil Refinery on 9-10 July. The 331st provided 4 crews for its first mission against Japan and joined 60 crews from the 16th and 501st. Col Peyton, the 331st Group Commander, led the crews of Captains Baughn and Goring and First Lieutenants Moore and Griffieon on the mission. Northwest Field's north runway was operational for the mission, and the wing's 64 Superforts launched at 30-second intervals. Approaching the coast of Japan, 50 enemy fighters were spotted, and two attacks were made. On one attack, First Lieutenant Maurer's crew exchanged fire with a fighter, but neither aircraft was hit. Flak over the target was moderate, and four aircraft suffered minor battle

*This altimeter setting procedure is used today in the United States' air traffic control system.



Figure 54

This 16th Group B-29B caught fire after its landing gear collapsed on landing.

damage. Sixty-one Superforts reached the primary target and dropped 469 tons of GP bombs on Utsube with the 331st contributing 27 tons to the total. Aircraft compressibility was excellent with 50 aircraft crossing the target in 33 minutes. Except for two 16th Group B-29Bs which landed at Iwo Jima, all aircraft reached Northwest Field. However, one aircraft crashed and burned on the runway after its landing gear collapsed on landing. (Fig. 54) Fortunately, the crew survived. Photo-reconnaissance showed the raid successfully knocked the plant "out of commission for at least several months, if not completely beyond repair." (37:4) While the 16th, 331st, and 501st were successfully striking Utsube, tragedy had struck the 502nd back at Guam.

On the night of 9 July, one of the 502nd's flight crews crashed shortly after takeoff on a training strike to Truk. At 2300 hours, the first of ten 502nd crews launched from Northwest Field on the unit's first shakedown mission. The launch went smoothly until the last aircraft, commanded by First Lieutenant Wilkes, suddenly wavered in the air moments after takeoff and plunged into the sea 200 yards northeast of Guam. An LCI crew patrolling the coastline saw the aircraft explode. Immediately

thereafter, personnel at Northwest Field heard a secondary explosion and saw a huge fireball light up the night sky. Air-sea rescue units searched the area thoroughly, but no survivors were found. "A piece of material containing the plane number was found which identified the crashed plane. A Mae West, 1 glove, and 4 green oxygen bottles were identified as accessories of the plane." (41:Jul 45) Meanwhile, the 502nd's remaining airborne crews continued the Truk mission knowing their striking force had been reduced by one. The 502nd's first combat training strike against Truk proved successful but was marred by the loss of Lt Wilkes' crew. The cause of the accident was unknown, but it may have been brought on by an engine malfunction.

The 315th's maintenance personnel faced a difficult challenge trying to keep the Superforts' engines operational. Although the Wright Cyclone 3350 engines on the 315th's flyaway B-29Bs were far better than those on the aircraft used in training, they still had a lot of valve problems.

The 3350 was known for swallowing valves. It was a strange engine to troubleshoot because the same problem would not always give you the same indication. One day as the aircraft were taxiing out for a mission, we pulled one A/C out of the line-up because we could hear the familiar loud tapping noise as it went by. The engineer had no indication of a problem, and the pilot was furious because he wanted to make the mission. We soon found the problem--[zero] compression on one cylinder, which meant a cylinder change. (50:4)

When the maintenance crews first arrived on Guam, they were authorized to change a maximum of three cylinders on an engine. However, in the summer of 1945 they received a TWX authorizing them to change all 18 cylinders, if necessary, because a labor strike at the stateside engine plant had severely disrupted the flow of replacement engines to the Pacific theater. This TWX dramatically increased the workload of the 315th's already overworked maintenance crews. The grueling work schedule was hard on all ground support personnel, and the men sought various outlets to relieve their tensions.

In July, the men of the 24th Air Service Group used their talents to improve morale by supplementing their beer rations. Finding something alcoholic to drink was not too hard for the flight crews, but the ground personnel's beer was rationed to two cans a week. With the help of some Seabees and Navy personnel, several members of the 24th built a homemade still and started making "Raisin Jack" and running off "white lightning." The procedure was an art form for several members who hailed from Kentucky and West Virginia, and their product sold for \$20 a gallon. (47:3) It was also 130 proof so the men used juice, water, or anything they could get to cut it. One night, someone spiked the water bag outside the 24th Headquarters

Squadron barracks with Raisin Jack. As a result, many men were unable to report for duty the following day. First Sergeant Walter Bolding analyzed the problem and was the first to discover the cause of the epidemic. Thereafter, the morale of the 24th was usually higher than many of the other groups.

On 12-13 July, the 315th attacked the Kawasaki Petroleum Center. The same four 331st crews from the previous wing mission joined 58 crews from the 16th and 501st for Empire Mission 6. In the primary target area, there were four separate, but adjacent, companies: Standard Oil, Rising Sun Oil, Nippon Oil, and Mitsui Products. Although the target was protected by heavy anti-aircraft defenses, there was little flak due to heavy overcast skies. Thirty-eight enemy fighters were spotted, and two brief, but unsuccessful, assaults were made on the Superforts. Fifty-three B-29Bs dropped 452 tons of bombs on the target before turning homeward. In the raid, the target's tank storage capacity was moderately damaged while 27 percent of the total roof area was also damaged. The target was not totally destroyed and would have to be hit again.

Unfortunately, the 315th suffered two combat losses on the Kawasaki mission. Both B-29Bs and crews were from the 16th Bomb Group. Shortly after takeoff on the mission, First Lieutenant Milford Berry's crew developed three runaway propellers on their aircraft and were forced to ditch at sea approximately 125 miles north of Guam. At least five men of Crew 28 were known to have bailed out before the crash. Of these, three were picked up alive by surface rescue vessels, one was found dead, and the fifth man was never located. The other five crewmen apparently went down with their Superfort. In the second incident, First Lieutenant James C. Crim's crew completed their bombing run at Kawasaki but failed to return to Northwest Field. Lt Crim and his crew were listed as missing; no word was ever received from the crew.

The three survivors of Lt Berry's crew owed a special debt of gratitude to the 315th's Personal Equipment Sections. The wing's life support specialists not only maintained and stored flight crew lifesaving equipment, but they also provided emergency procedures training. Although the flight crews hoped they would never have to use their parachutes, life vests, or rubber rafts, they knew the dangers of the long overwater combat missions.

Any aircrew member who has returned safely from the unenviable experience of 'ditching' must have taken time out to thank the Lord for his good fortune. But a sense of appreciation must have told him that he should have reserved a mental note of tribute to those men responsible for the condition of the lifesaving equipment which made this 'ditching' a success. (32:Aug 45)

Each member of the wing's personal equipment sections had a tedious job of maintaining thousands of pieces of life support equipment in top working condition. They measured the success of their support efforts in the number of crew lives saved by the operable condition of the life support equipment they provided.

By early July, the 315th Wing staff was concerned about repeated reports of serious malfunctions with the APG-15 radar-directed tail turret system. Crew gunners had increasingly reported they were forced to recalibrate the APG-15 inflight even though maintenance personnel had calibrated the system perfectly prior to takeoff. In addition, the APG-15 frequently locked-on to a target without searching or would search but refuse to lock-on to a target. Fortunately, enemy fighter attacks had been light. However, intelligence reports indicated the Japanese were conserving their fighter forces and building strength to defend the home islands against an American invasion. Since the 315th's crews were sitting ducks for enemy fighter attacks without the APG-15 system, the wing staff wanted the problem corrected as soon as possible.

On Friday, 13 July 1945, the wing initiated Special Project EPR No. 1 to solve the APG-15 problem. Major William G. Pierce was assigned as director to accomplish the project's threefold purpose.

1. To place in combat readiness at once the APG-15 and related equipment in operational B-29 aircraft under this command.
2. To teach group personnel how to use this armament.
3. To teach all B-29 gunners of these groups how to operate the equipment advantageously. (38:Jul 45)

A special group of people was selected to help Major Pierce. Dr. Vance Holdam from MIT, the designing engineer on the APG-15, was flown to Guam to help solve the maintenance difficulties encountered by every group in the 315th. Test flights were conducted using F-5* aircraft to make simulated attacks on B-29Bs to evaluate the APG-15 system and its operators. Training courses were developed and given to maintenance and flight crew personnel. The 315th's goal was to ensure that all personnel and equipment were fully prepared if, and when, the Japanese decided to use their remaining air power to counter the 315th's operations. (Fig. 55)

On 15-16 July, the 502nd Bomb Group got its baptism of fire on Empire Mission 7. The target for the mission was the Nippon

*Reconnaissance versions of the P-38G were designated the F-5.

Oil Refinery at Kudamatsu. Captains Hall, Worda, and Swartz and First Lieutenant Boulware led their 502nd crews on that unit's first combat mission. Col Sanborn, the 502nd Group Commander, flew as an observer on Capt Hall's aircraft. The 315th launched 71 Superforts for a return visit to the weakly defended Kudamatsu plant. An 85-mile bomb run was planned using a 1-minute bombing interval between aircraft. Two crews were sent ahead to act as weather scouts for the primary target and then completed a diversionary bombing attack on the Ube Coal Liquefaction Company. Enemy opposition was negligible, and 61 Superforts pounded Kudamatsu with 494 tons of bombs. All four 502nd aircraft bombed Kudamatsu, and Capt Hall's crew split the target in half with 27 bombs. After bomb release, the crews broke left and headed to a turning point on northern Kyushu. They then cut across the eastern tip of Kyushu and headed for Guam via Iwo Jima. There were no casualties or aircraft losses for the mission.

Damage reports from the Kawasaki raid showed the target was virtually destroyed. All the refinery units were damaged or destroyed, and there was also extensive damage done to the adjacent warehouse buildings and a crude oil tank farm.

341,000 barrels, or 85 percent of the original crude oil tank capacity (400,000 barrels) destroyed or damaged; 49,300 barrels or approximately 70 percent of the original intermediate oil tank capacity (71,300 barrels) destroyed or damaged; 17,200 barrels or approximately 15 percent of the original refined oil tank capacity (115,700 barrels) destroyed or damaged; 2 oil bunkering piers on the south side of the refinery destroyed. (37:6)

The wing's first raid with all four bomb groups participating was tremendously effective and set the stage for larger bombing strikes.

The 315th's Superforts were readily identified in combat by their distinctive external features and unit markings. The 18-foot APQ-7 Eagle radar antenna mounted beneath the fuselage and the single tail gun turret were unique to the 315th's B-29Bs. Each Superfort also had a large diamond symbol painted on the tail with one of four letters (B,L,Y,H) inscribed to identify the 16th, 331st, 501st, and 502nd Bomb Groups, respectively. (Fig. 56) Unfortunately, the wing's Superforts were also easily identified by the enemy on the ground.

The 315th's military police sent out a patrol to search for Japanese soldiers on 16 July. Six days earlier, security guards patrolling the jungle area east of Northwest Field had found evidence of recent Japanese habitation. Thus, a patrol was organized and sent into the designated sector. On the first day



Figure 55
Sergeant Ed Hering
checks the APG-15
tail turret.



Figure 56
Two 315th B-29Bs with APQ-7 radar antenna clearly
visible. Diamond B indicates 16th Bomb Group.

of the patrol, they killed four Japanese soldiers and wounded another who died later. "Two days later, another pair of enemy survivors were sent to accompany their ancestors." (37:Jul 45) Although this patrol was successful, more Japanese soldiers were probably still at large on the island. As a result, two weapons carriers were equipped with 50-caliber machine guns and were used to guard against future reprisals by any remaining Japanese soldiers.

On 16 July, the 16th Bomb Group staff was reorganized. Lieutenant Colonel Castellotti, acting commander of the 16th, called a meeting of all officers at 1600 hours and made the following announcement:

As of 1330 this afternoon, I assumed command of this organization permanently. . . . Col Gurney will not be back. Where he is going, I cannot tell you. But I can tell you that we have lost a hell of a fine officer. As far as his policies in training, organization, and discipline are concerned, they shall remain the same. (32:Jul 45)

Lieutenant Colonel Collier H. Davidson assumed the 16th's Deputy Commander duties. Major Zed S. Smith III was assigned to replace Lt Col Davidson as operations officer. Lt Col Castellotti concluded by praising the group staff for their past performance and stressed the importance of full cooperation between the group and wing staff personnel.

In July, there were also major changes to the organizational and command structure for strategic forces operating in the Pacific. With the end of the war in Europe, the Eighth Air Force was being converted to very heavy bombardment operations and scheduled to deploy to Okinawa. As a result, the United States Army Strategic Air Force (USASTAF) of the Pacific was established at Guam on 5 July to control and coordinate the pre-invasion combat operations of the Twentieth Air Force and the redeploying Eighth Air Force. (10:3) (Appendix 13) On 16 July, the XXI Bomber Command officially became known as the Twentieth Air Force and headquartered at Guam with five B-29 wings, the 509th Composite Group, the Seventh Fighter Command, and the Guam Air Depot under its command. (Appendix 12) Thus, the USASTAF became the guiding force for the final assault on Japan with Twentieth Air Force carrying the load until the Eighth Air Force became operational.

Prior to takeoff on Empire Mission 8 on 19 July, Capt Henry Dillingham's crew entertained two special guests. Mr. Walter Dillingham was on a special diplomatic mission to the Philippines and stopped at Northwest Field to see his son's crew takeoff on their combat mission. Mr. Dillingham was escorted by General Giles, Commanding General of the Strategic Air Force, who also shook hands with each of the crew members and wished



Figure 57

Gen Giles, Gen Armstrong, and Mr. Dillingham with Capt Dillingham before his first combat mission.

them all luck on their upcoming mission. (Fig. 57) Capt Dillingham's crew was one of eleven 402nd Bomb Squadron crews representing the 502nd Bomb Group's total B-29B striking force for this mission.

The 502nd's crews were assigned to strike a special target on Empire Mission 8. The wing's primary target was the Nippon Oil Refinery at Amagasaki. However, to test the 502nd's individual bombing accuracy, its special target was a small oil tank farm consisting of 10 oil tanks in an area measuring 850 feet by 1,000 feet and located just west of the main refinery. The "greenhorn" 502nd crews were determined to prove their bombing skills at Amagasaki. At the beginning of the bomb run, Captain Dipple's crew had an engine fail, but they continued the attack. Searchlights coned Captain Ramey's aircraft, and flak bursts ringed his Superfort. The crew promptly dropped rope to confuse the searchlights, and Capt Ramey went to full power to escape the deadly fire. All eleven 502nd crews released their bombs on their special target, and the wing's total force of 83 B-29Bs crossed the target area in 34 minutes. The crews executed their breakaway maneuver and headed for Guam.

Post-mission photo-reconnaissance showed the wing attack on Amagasaki had mixed results. On the one hand, the 502nd wiped



Figure 58

A 315th crew safely returns to Northwest Field after another Empire mission.

out the small oil tank farm with only two of the ten large oil tanks left undamaged--and those two tanks were empty. After the mission, Gen Armstrong complimented the 502nd for its bombing results and stated, "I am proud to command a wing that has the 502nd Group in it." (41:Jul 45) Unfortunately, the wing's 72 other aircraft had inflicted only minor damage to the main refinery area, and Amagasaki would have to be hit again.

On 22-23 July, the 315th launched 82 aircraft on Empire Mission 9 to raid the Ube Coal Liquefaction Company. This important Japanese refinery was a leading producer of synthetic oil and a high priority target in a Japanese petroleum industry crippled by the U.S. naval blockade. Searchlight and flak activity over the target area was light and inaccurate. From an altitude of 12,000-13,000 feet, 74 Superforts dropped 637 tons of bombs on the primary target. Four other aircraft struck targets of opportunity due to radar malfunctions. All aircraft returned safely with only four receiving minor flak damage. Iwo Jima also proved its value on this mission with 19 of the wing's



Figure 59
A bomb-bay door damaged by flak.

crews landing there. On this raid, 31 structures were damaged at the plant, but most of the refinery was still in operation.

Empire Mission 10 was flown on the night of 25-26 July against the Hayama and Mitsubishi Oil Refineries. These targets were located in the heavily defended Yokohama-Kawasaki district just south of Tokyo, and the wing planned to use maximum compressibility for the attack. Of the 85 aircraft launched on the mission, 7 aborted prior to the target. The Japanese defenders took advantage of the clear night sky and used their searchlights to scour the sky for the Superforts. The flight crews dropped rope to confuse the enemy searchlights, but the defensive fire was relentless. Capt Dillingham's aircraft was hit by flak and exploded in midair. It was a tough night in the target area with 13 aircraft damaged and Capt Dillingham's crew lost in action. (Fig. 59) In the raid, 34 percent of the total storage tank capacity and 17 structures at the Hayama-Mitsubishi oil installations were destroyed or damaged. However, the joint target was still operative.

The dedicated efforts of the 315th's ground support personnel enabled the wing to fly its rapid succession of Empire missions. The sheet metal shops promptly repaired the battle

damaged Superforts. (Fig. 60) The electronics sections achieved a 90 percent effectiveness rate for the APQ-7 radar equipment while the aerial photo section personnel kept the O-5 radarscope cameras operational. (38:Jul 45) Maintenance work stands and towing tugs were in short supply so the engineering sections built their own stands and used jeeps to tow equipment. The armament and ordnance sections completed all bomb loading requirements on schedule despite shortages in B-7 bomb shackles and C-6 bomb hoists. The flight-line maintenance crews kept the aircraft fueled and completed the 50-, 100-, and 200-hour inspections. (Fig. 61) All 315th ground support personnel deserved a share of the credit for the wing's outstanding record during the first 10 Empire missions with 618 aircraft launched out of 636 scheduled.

The last Empire mission for the month of July was flown on 28-29 July against the Nippon Oil Refinery at Shimotsu. This plant was an important refiner of crude oil with large and modern facilities and good shipping and rail connections. The weather in the target area was ideal with overcast skies hampering the enemy's heavy searchlight and flak defenses. Of the 84 Superforts airborne, 78 saturated Shimotsu with 658 tons of bombs. The plant exploded, and the ensuing fires were the brightest the crews had ever seen.

[Reconnaissance] photos showed it was unnecessary to return to the refinery for in this one mission the target was almost completely destroyed. 927,000 barrels of the 1,246,000 barrel capacity were damaged while the 1,274,100 cubic foot gasometer capacity was almost completely destroyed. 69 percent of the 210,254 square foot area was destroyed. The target was thoroughly saturated with bombs and obliterated beyond repair. (37:14)

Target photo-reconnaissance also showed 60 percent of the wing's crews "placed their bomb salvo centers within 1,000 feet of the aiming point." (7:65) As a result, the Shimotsu Oil Refinery was erased from the priority target list by the 315th's pinpoint APQ-7 bombing accuracy.

The wing's photo lab personnel were extremely busy in July. During the month, they processed 1½ million frames of radarscope photography film from the wing's nine Empire missions and numerous training sorties. Before each of these missions, the photo lab personnel carefully calculated the operating distances for the O-5 radarscope cameras to conserve the limited supply of valuable film. After the missions, they carefully analyzed the radar photographs to assess and validate the wing's target damage until post-strike photographs were obtained. In addition, the damage assessment photographs for the wing's Empire strikes in July also validated a photo lab developed technique for plot-

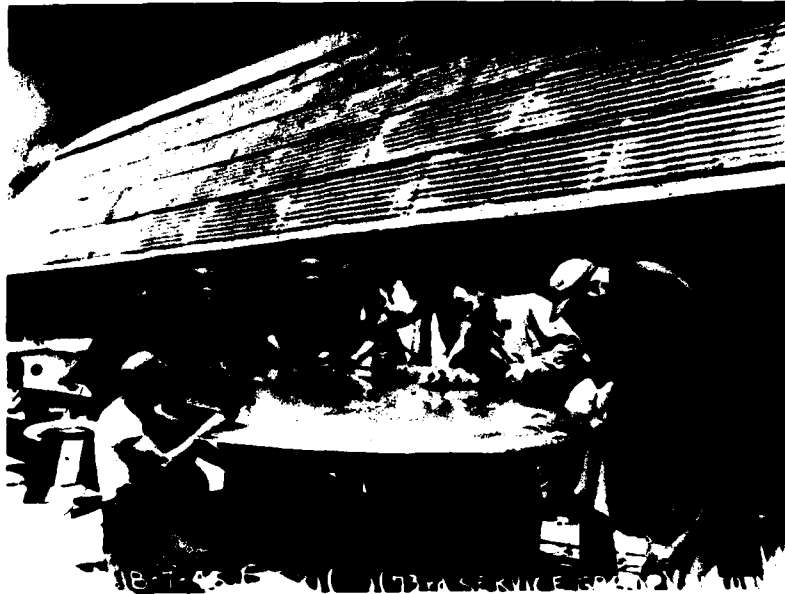


Figure 60

Men from the 581st Air Engineer Squadron's sheet metal shop repair a battle damaged B-29B wing.



Figure 61

Refueling a thirsty B-29B.



Figure 62
Sergeant Roger Hunting.

ting aircraft bomb run tracks to determine bombing accuracy. The photo lab also ran a series of experiments and produced a suitable formula to prevent the fogging of photographic paper caused by the tropical climate. Finally, the photo lab completed the ordinary photo work in the public relations, identification, historical, and other related fields of ground activity.

Likewise, the 315th's Weather Section worked at a hectic pace in July. The month's stepped up radar photography, training, and Empire missions taxed the weather section to provide timely and accurate forecasts. In response, the weather section developed a special weather display to brief flight crews. The display used miniature cutouts of weather symbols treated with luminescent paints to depict forecasted weather conditions for the missions. Flight crews reported the new technique vividly portrayed the weather information and made it easier to remember the data on the long Empire missions.

For its first mission in August, the 315th planned Empire Mission 12 as a large scale raid against three previously bombed targets. The mission plan split the wing's B-29Bs into two forces to strike three adjacent targets in the heavily defended Kawasaki area south of Tokyo. One force would attack the Kawasaki Petroleum Center previously raided during Empire Mission 6 on 12 July. Meanwhile, the other force would concentrate on the Hayama and Mitsubishi Oil Refineries partially destroyed on 25 July during Empire Mission 10. Bombing altitude for the mission would be 15,000-16,000 feet. Since these facilities had already claimed 315th aircraft and lives, the flight crews were apprehensive but eager to knock them out.

On 1-2 August, the 315th launched 130 Superforts for Empire Mission 12. Colonel William A. Miller, wing Deputy Chief of Staff, flew with First Lieutenant Larson's crew, 502nd Bomb Group, and led the entire wing off on the mission. The weather in the target area ranged from clear to 9/10 thin overcast skies. Two enemy fighters attacked First Lieutenant Ethier's aircraft but missed. An estimated 130 blue and green searchlights blanketed the skies, and antiaircraft fire was medium to heavy. Two aircraft sustained heavy flak damage while 13 others received minor damage.

One plane, H-5, commanded by Captain Woida, received major damage. The number one engine was shot out, fuel cells and gas lines were damaged, and other damage was done to the bomb-bay doors, wing, and other surfaces of the plane. It landed at Iwo, and the crew returned in a plane of the 16th Bomb Group which had previously been left at Iwo for repairs.
(41:Aug 45)

Captain Woida's aircraft was one of five forced to land at Iwo with heavy battle damage or engine trouble. The crews reported they had left the Kawasaki Petroleum Center and Hayama-Mitsubishi refineries engulfed in flames and were confident the targets had been destroyed.

The 315th's raid on the Kawasaki area was part of the largest single-day bombing effort by Twentieth Air Force during World War II. On 1 August, Twentieth Air Force dispatched 836 B-29s to bomb a variety of Japanese targets. Of these, 784 reached and bombed their assigned targets, including 120 Superforts from the 315th which dropped 1,025 tons of bombs on the Kawasaki targets. The damage report for the Kawasaki attack listed the Kawasaki Petroleum Center as "practically inoperative" while the Hayama-Mitsubishi refineries received "crippling damage" with 40 percent of the primary structures destroyed. (37:Aug 45) Five other industrial installations were also struck and severely damaged. Consequently, the three Kawasaki plants were useless to the enemy.



Figure 63

Tail gunner Robert E. Pettis, 502nd Bomb Group, chalked up another Empire mission.

On 5-6 August, the 315th flew its most spectacular mission, an attack on the Ube Coal Liquefaction Company. This target had been partially destroyed during a previous wing attack on 22-23 July. On this return visit, the wing launched 113 aircraft and 108 attacked the primary target with 938 tons of bombs.

The damage assessment was not available until 22 August, but it revealed a spectacular bombardment job. The refining units of the plant were 100 percent destroyed or damaged, and 80 percent of the stores and workshops were destroyed or damaged. In addition, 50 percent of the [adjacent] Iron Works Co. had been damaged. (37:Aug 45)

Furthermore, the nearby dikes protecting the Ube plant from the sea were hit by bombs. (Fig. 64-65) The target photo-interpreter who analyzed the damage sent a special post-strike photograph to Admiral Nimitz with a note attached reporting, "Target destroyed and sunk." (12:236) In a letter of commendation to the Army Air Force commanders, Admiral Nimitz remarked that it was the first time bombers had ever sunk a factory.



TARGET 90.32-1841

UBE COAL LIQUEFACTION CO

FORE 315TH BOMB. WING STRIKE

5-6 AUG 1945

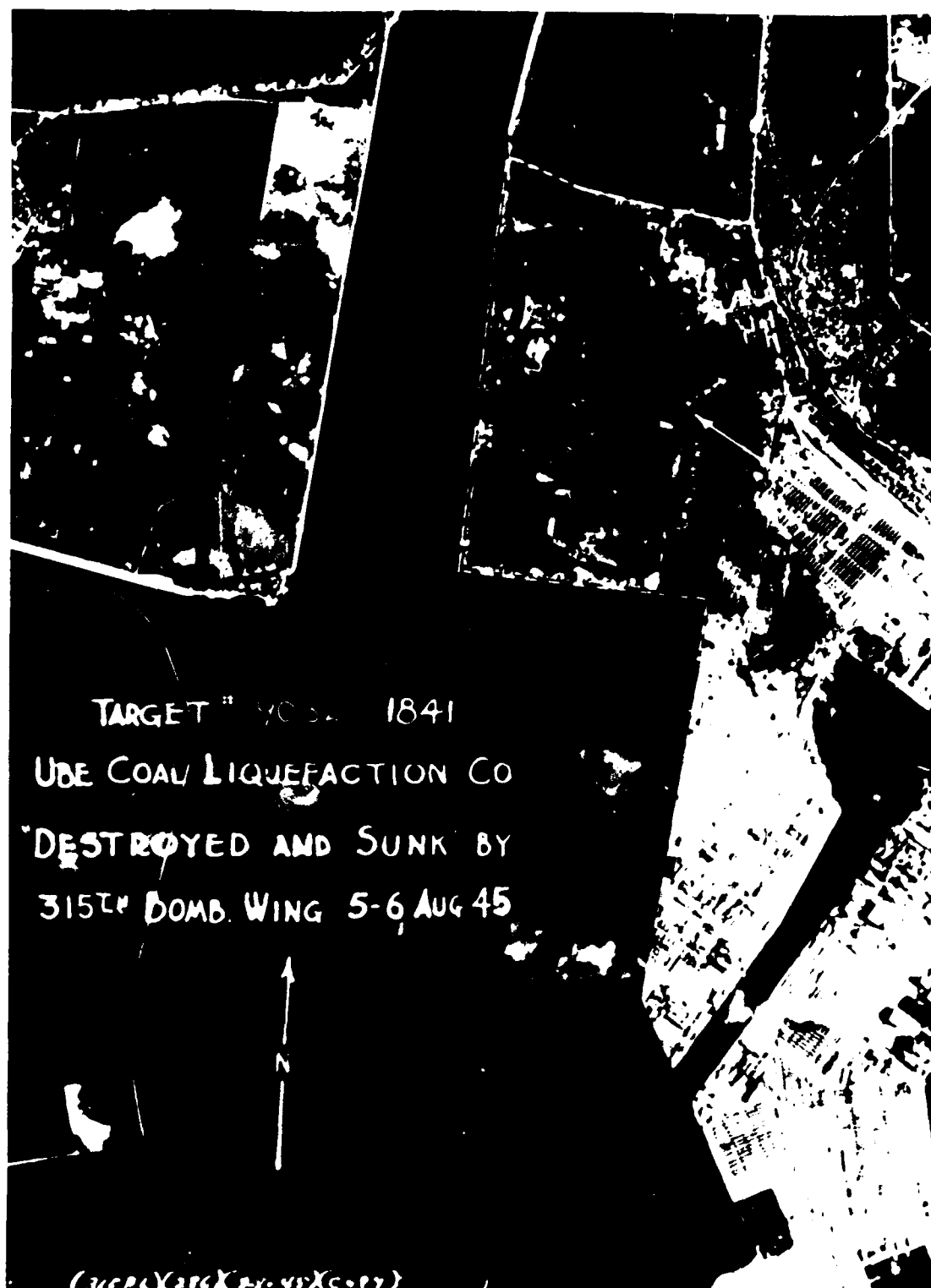


Figure 65
Dikes breached by bombs and the flooded.

On the Ube raid, Crew 1102, 502nd Bomb Group, aborted their takeoff but still completed the mission. Their takeoff was normal through 65 miles per hour, and Second Lieutenant John T. Newburg, the copilot, continued to call the increasing takeoff speeds. Suddenly, he shouted that engine number three had lost power, and Captain Horatio W. Turner III, the aircraft commander, promptly aborted the takeoff. As their aircraft rapidly approached the end of the runway, Capt Turner told his copilot to get on the brakes with him while he pulled the emergency brake handles with his right hand. In succession, the left and right scanners reported the wheels were on fire as smoke poured from the overheated brakes. The aircraft ran off the end of the runway and onto the coral overrun, heading straight for a 50-foot-high bank. Capt Turner described his instinctive reaction to avoid a collision.

Luck was with us. I felt some brake just as we were getting really close to the embankment. I stood on the left brake and let the airplane ground loop around the locked wheel. We cleared the embankment and were able to taxi out of the coral overrun and back along the runway and taxiway to the ramp. When I climbed out of the plane, my flying suit was wringing wet.
(11:331)

Maintenance promptly repaired the engine, found the cooled-down brakes were operable, and topped the aircraft off with fuel. Capt Turner and his crew launched again less than an hour after their aborted takeoff and flew the mission as "Tail End Charlie." They reached Ube and dropped their bomb load on the target. They were the last crew to return to Guam at 1140 hours on 6 August with a flight time of 15 hours and 25 minutes.

Meanwhile, Colonel Paul Tibbets and his 509th Composite Group crew had dropped the world's first atomic bomb on Hiroshima. After his bombardier released the atomic bomb at 0815 hours (Hiroshima time) on 6 August, Col Tibbets immediately racked his aircraft, the "Enola Gay," into a sharp 150-degree turn to escape the impending blast. The bomb exploded less than a minute later, and a blinding light filled the sky. A huge, dark mushroom cloud erupted over Hiroshima, and $4\frac{1}{2}$ square miles of the city were leveled. More than 71,000 of Hiroshima's 245,000 population died instantly. (12:254) However, the Japanese government did not surrender following the attack. Three days later, Major Sweeney, flying in "Bock's Car," led another 509th crew to drop a second atomic bomb on Nagasaki. News of the devastating new weapon spread rapidly through the Pacific, and the 315th finally learned the well-kept secret mission of its former subordinate unit. Everyone waited to see if the Japanese would finally call it quits. They didn't, and the 315th prepared for another mission.

Empire Mission 14 was a return strike to the Nippon Oil Refinery at Amagasaki on 9-10 August. In the target area, there were a large number of Japanese fighter aircraft. However, only one made what might have been an attempt to ram First Lieutenant Pananes' aircraft and came within 15 feet. Flak activity was moderate to heavy with 11 Superforts receiving minor damage. Of the 109 B-29Bs launched, 97 dropped 918 tons of bombs on Amagasaki.

Late photo reports said the target was almost completely destroyed. Damage was well distributed. In the tank area, only two tanks remained undamaged. Synthetic oil plants showed damage to a gasometer, four buildings, and a sulphur removal unit. In the refinery area, four refining units and 30 tanks were destroyed. In addition, nine other tanks and 25 buildings were damaged. (37:Aug 45)

The 315th finished the job it had started at Amagasaki on Empire Mission 8 and left one more Japanese oil refinery in ruins.

The 315th's armament personnel performed their most remarkable feat for Empire Mission 15. The wing scheduled 145 Superforts to carry a payload of smaller 100- and 250-pound bombs for the mission. Unfortunately, the armorers had to load the 100-pound bombs by hand because the mechanical bomb hoists were designed for larger bombs. The armorers worked tirelessly on the sweltering flight line and in the oven-hot bomb bays to complete the monumental task. (Fig. 66) To load the 16th Bomb Group's 38 Superforts, "Approximately 80 men worked for 17 hours lifting the bombs into place and after the task had been accomplished many were so tired they were unable to raise their arms above their shoulders." (32:Aug 45) (Fig. 67) Thanks to the armorers' remarkable efforts, the 315th's B-29Bs were ready to deliver over 12,000 bombs to Japan.

On the night of 14-15 August, the 315th conducted its longest and largest raid of the war. The target for Empire Mission 15 was the Nippon Oil Refinery at Tsuchizaki on the northern coast of Honshu Island--a round trip distance of 3740 statute miles. Gen Armstrong led the mission and launched at 1637 hours. However, some of the other crews, including Col Hubbard's, were temporarily delayed on the ground.

When his [Hubbard's] airplane was out on the runway, a jeep drove up and an officer signaled to cut engines. Once this was done the officer climbed into the cockpit and said, 'Admiral Nimitz says the war is over.' Shortly afterward, another jeep rushed up and the driver yelled, 'Get going! LeMay hasn't received word that the war is over.' (12:237)

Postponed for several days by Japanese-American peace negotiations, the wing's maximum effort mission was finally underway.



Figure 66

Armament personnel load bombs destined to strike a Japanese oil refinery.



Figure 67

485th Bomb Squadron armament crew: Bill Earl, Ed Hering, Norm Dahl, Lenny Altieri, Dick Schobert, and John Maxworthy.



Figure 68

"The Uninvited," Capt Trask's aircraft and crew dropped the last bombs on Japan.

Enroute to the target, the skies were full of B-29s. Approaching the coast of Japan, the 315th's crews saw hundreds of homeward bound B-29s. Col Hubbard and other aircraft commanders turned their landing lights on to avoid a collision in the traffic jam above Honshu Island. Although 9 wing aircraft aborted the mission, 134 B-29Bs approached the lightly defended target at 10,000-12,000 feet and began their radar bombing run. The Superforts crossed the Tsuchizaki plant and dropped 954 tons of bombs on the target. Huge fires and dense smoke covered the refinery as the 315th's crews turned to start the long journey to Northwest Field.

Before the last 315th B-29B landed at Guam on the morning of 15 August, the war was over. President Truman had announced the unconditional surrender of Japan, and the returning crews heard the news over their radios. Thus, the 315th had inflicted the final bombing damage to the Japanese Empire with the last bombs away at 0339 hours, 15 August 1945. Captain Dan Trask's crew, 502nd Bomb Group, was the last to takeoff on Empire Mission 15

and was the last to land 16 hours and 45 minutes later. His crew and aircraft, "The Uninvited," immediately "received a publicity spread as the last plane over the Empire during the War." (41:Aug 45) (Fig.68)

Results of photo-interpretation of damage brought now familiar words: 'Almost completely destroyed or damaged.' Photographs disclosed that no portion of the target was untouched. The three refining units were a tangled mess of wreckage, the main power plant still standing, but seriously hit. More than 66 percent of the tank capacity was destroyed. Lesser installations, including the workers' barracks, were destroyed. (37:15)

The bombing results were particularly impressive for the longest nonstop combat mission ever flown.

THE WAR IS OVER

Shortly after the end of hostilities, Twentieth Air Force was tasked to fly mercy supply missions to 70,000 Allied prisoners of war (POWs) held in Japanese camps. (17:11) The POWs desperately needed food, medicine, and clothing to survive until friendly forces could reach them. Unfortunately, friendly ground forces were still far away from the POW camps located in China, Manchuria, Formosa, Korea, and the four main Japanese home islands. Consequently, Twentieth Air Force was directed to use its B-29 force to airlift the needed supplies to the POW camps. Naturally, the 315th contributed to this great humanitarian effort.

The 315th was directed to complete two support taskings during the preparation stage of the mercy mission operation. On 23 August, crews began flying to the Philippines to pick up 24,000 cargo parachutes stored there for the planned American invasion of Japan. Meanwhile, other crews flew to Tinian and picked up 205,000 pounds of food and delivered it to Saipan to make POW supply bundles.

Many of the supplies were packed in used fuel drums. Service crews, who called themselves the 'Saipan Samaritans,' welded two barrels together into what looked like 'blockbusters.' The oil drums filled with supplies were anchored to the bomb racks by the same shackles that had once been used to secure bombs. (24:11)

The 315th completed its two support taskings within 10 days and prepared to deliver the supply bundles.

Captain Lewis H. Ribble and his 331st Bomb Group crew flew one of the parachute missions to the Philippines. They departed

Guam at dusk and landed early the next morning at the Florida Blanca airstrip just north of Manila. They loaded the parachutes and planned to leave early the next morning to deliver their cargo to Tinian. Staff Sergeant Laurence O. McCarthy, the crew chief, spent the rest of the day souvenir hunting and found a bomb damaged Japanese "Betty" bomber in a nearby revetment. He salvaged "a torn section of fabric from the tail feathers (elevator) having a decal with data in Japanese printed on a black background." (46:1) The next morning, the crew took off in a driving rain.

We were in heavy rain for about 4 or 5 hours, then broke out of it to see a big double rainbow on the white fluffy clouds below. I [SSgt McCarthy] was then sitting at the forward end of the tunnel at the astro dome from where it appeared that the rainbow was all around us. We were then near the approximate position where the cruiser Indianapolis went down. (46:2)

The USS Indianapolis had delivered the atomic bomb to the 509th at Tinian and was heading for the Philippines when a Japanese torpedo delivered a lethal blow to its forward powder magazine. The USS Indianapolis sank so fast that no SOS message was sent, and only 300 of the 1,050-man crew escaped into the water. Unfortunately, less than 100 survivors were found by air-sea rescue units three days later. Many had drowned, and many others were attacked by sharks. At Tinian, Capt Ribble parked his aircraft, "Slicker 6," next to the "Enola Gay" with "Bock's Car" parked next to the "Enola Gay." Capt Ribble and his crew stopped to reflect on the coincidences of the mission and the unique double rainbow they saw below their aircraft as they passed over the gravesite of the ill-fated USS Indianapolis.

Unfortunately, the 502nd Bomb Group had two fatal aircraft accidents during the 315th's support missions. On the night of 27 August, Captain Claude S. Larson's aircraft crashed into Mt. Tapotchau, near Isley Field, Saipan. The crash occurred when Capt Larson attempted a second approach following a missed landing attempt in low visibility. There were no survivors.

Four days later, on another flight to Manila, airplanes of the 411th Squadron took off from the Philippines to return to Guam. Crews landing at base reported very bad weather enroute, possibly a typhoon. Consequently, anxiety spread through the Group when it became apparent late the night of 31 August that Captain William J. Pananes and his crew were overdue. As time passed with no word, search parties were sent out to scour the sea on his flight path. No traces were found except an empty life raft. (41:Aug 45)

The 315th paid a heavy price to support the mercy missions, however the wing successfully completed its assigned taskings for a worthy cause.

The 315th flew its first major POW mercy mission on 29 August. Thirty Superforts carried supply packages to POW camps near Mukden, Manchuria, a round trip of 4,000 miles, as well as the Tokyo-Yokohama, Shikoku, and Honshu sectors in the Japanese home islands.

A B-29 carried sufficient food for 200 prisoners. Eighteen bundles were loaded in each bomb bay and the drops were made from less than 1,000 feet. Targets were designated by furrows, paint, or cloth panels on the ground. . . . The bombardier, navigator, and radar operator combined their efforts to determine the exact moment for 'supplies away.' (17:11)

Although the camps were difficult to locate, two 315th crews succeeded in making radio contact with overjoyed POWs at one camp in Mukden. The POWs used a walkie-talkie set to communicate with the B-29Bs and asked the 315th crews to pass on a message "that 'Captain Campbell and nine members are in a POW camp at Mukden'; these were the survivors of the 462nd's 'Wild-Hair,' downed by an aerial bomb before reaching the target on December 21, 1944." (2:314) The 315th crews copied the message and proudly relayed it to help a fellow Superfort crew.

Between 30 August and 2 September, the 315th flew two major and three smaller POW mercy missions. On 30 August, 29 crews flew the second major POW mission to camps in the Mukden and Tokyo areas. Two days later, on 1 September, 52 crews dropped 1,872 packages to POWs at camps in the Kobe-Osaka, Shikoku, Nagoya, and northern Honshu areas. Subsequently, the 315th flew three smaller mercy missions to camps at Osaka, Honshu, Kyushu, Hokkaido, and Narumi. Up to seven 315th aircraft were involved in these smaller missions and dropped between 72 and 252 packages to the waiting POWs.

On the 2 September mercy mission to Osaka, the 16th Bomb Group lost 10 of its members in an aircraft accident. A few hours after takeoff, First Lieutenant George R. Hutchison's crew contacted the tower at Northwest Field and reported mechanical difficulties with their aircraft. Lt Hutchison's crew and two passengers, Captain James O. Clark and Captain Lewis P. Town, returned to base to land. After circling the field for a few hours to burn off fuel, the crew prepared for landing.

Finally, it came in for what at first seemed to be a normal landing. But at the last moment, it swerved, hit a wingtip on a tree, and burst into flames. The only members of the crew saved were two gunners-- Sergeant Davis R. Flynt, Jr. and Corporal James A. Humbird. The aircraft broke into two parts, and they were able to get out of the tail section. (32:Aug 45)

The men of the 16th paid their respects to their deceased com-

rades during a funeral held the following day in the group's briefing room. Later, the deceased members were buried in a Marine Corps cemetery south of Agana.

On V-J Day, 2 September 1945, the 315th participated in a B-29 Show of Force mission over Tokyo Bay. The mission was the culminating event in an escalating B-29 air power display ordered by Gen Spaatz, the Commander of USASTAF.

Immediately after hostilities ceased, Spaatz directed that the Twentieth provide 'a display of air power . . . continuing and increasing between August 19 and V-J Day.' Operational plans called for almost daily flights over the Tokyo plain by B-29s drawn in rotation from the five wings, all planes to carry ammunition, but no bombs. (2:311)

The 315th immediately began planning for its scheduled participation in the V-J Day ceremony because it would be the wing's first attempt at formation flying since it arrived overseas. The air power flights didn't begin until 30 August due to weather. Three days later, on 2 September 1945, the surrender ceremonies were conducted aboard the battleship Missouri in Tokyo Bay. The 315th's Superforts were among a force of over 400 B-29s circling above Tokyo Bay at 3,000 feet. The crews watched the events below and listened to the broadcast of the ceremonies on their radios. For the first time, many of the 315th's crews flew over Japan in the daylight and saw the awesome destruction the B-29s had rained on the cities of Japan.

The period after V-J Day was one of frustration, boredom, and constant thoughts of one goal--going home. Most of the men felt they would be the last to go home because they had been overseas for less than six months and hadn't accumulated enough discharge points to leave the Army. Moreover, there was insufficient work to keep the men busy. To meet this problem, education, athletic, and recreation programs were started. Officers clubs and service clubs for the enlisted men were built. Although the tiny island of Guam provided few diversions, there were frequent visits to the beaches at Tumon Bay and Talefafo Bay as well as numerous sightseeing and social trips up and down the island. Movies, letter writing, and bull sessions about postwar plans helped to fill the hours. The postwar atmosphere became resort-like, but the weeks turned into months and by November only a trickle of men had shipped out for home.

The 315th's last major achievement as part of Twentieth Air Force occurred on 1 November 1945. On that day, Gen Armstrong, leading a flight of three Superforts, flew nonstop from Chitose Airfield in Hokkaido, Japan, to Washington D.C., over the great circle route. This was the first such flight of its kind, and all participating crew members were awarded the Distinguished Flying Cross.

In November 1945, the 315th began a rapid withdrawal to the States. Under Project Sunset,* each bomb group's authorized aircraft strength was reduced from 50 to 30, and the Superforts were ferried to the States by the flight crews. This first stage aircraft transfer was also used to carry personnel eligible for discharge from the Army. However, most of the men boarded slow-moving troop ships for the long voyage to San Francisco via Honolulu. By February 1946, the wing's manpower strength had been reduced from 11,500 to 3,000 men, and the wing was directed to reduce its total aircraft to 24 B-29Bs.

On 15 February 1946, the wing was consolidated for the final withdrawal period. All remaining bomb group personnel joined the 501st Bomb Group, reducing the 16th, 331st, and 502nd to "paper unit" status. The Sunset Project was set in motion again, and a steady stream of aircraft headed for the States. The three unmanned bomb groups were deactivated on 15 April, and all remaining 315th Wing Headquarters personnel were transferred to the 501st. For the next month, the 501st Group staff also served as the wing staff. According to official documents, the 315th was transferred in nonoperational status (without personnel or equipment) to the Fifth Air Force on 15 May 1946.

*The Sunset Project directed the postwar return to the United States of all surplus flyable very heavy, heavy, and medium bombardment aircraft, transport aircraft, and crews from the Pacific Theater of Operation (PTO).

Chapter Four

CONCLUSION

Twelve hundred sorties flown; nine thousand tons of HE bombs dropped; and four airplanes lost. Quite a record.

General Curtis E. LeMay (9:377)

The devastating impact of air power marked the beginning and the end of World War II for the United States. Japan's stunning, debilitating attack at Pearl Harbor instantly proved the offensive value of air power. In Response, America built the world's most powerful air arsenal, and Gen H. H. Arnold ensured the B-29 Superfortress was part of it. Despite early developmental setbacks, American industry provided the B-29 to its military forces so they could carry the war across the vast Pacific Ocean to Japan's homeland.

The Superfortress, pride of the AAF, did all this and more, but the road to victory had been a long and tedious one. History books will say little about the men who conceived, modified, and produced World War II's most intricate and effective aerial weapon. Yet the midnight oil they burned in laboratories and factories in America was the pilot flame that ignited all of Japan in the conflagration that reduced that nation's economic and social life to ashes. (18:25)

America's first very heavy bomber had been placed in the hands of the Twentieth Air Force, and its leaders charged to use it effectively against Japan. They did!

The Twentieth Air Force decisively accomplished its strategic bombardment mission. In 14 months of combat operations, it amassed a force of over 1,000 B-29s and repeatedly struck Japan's industrial heart. Its leaders built bases in the Pacific and carried the war right to Japan's doorstep, destroying Japanese military claims that American B-29s would never strike Japan from the Marianas.

In 1945, concentrated American air power forced an enemy's surrender without land invasion for the first time in military history. Because of the precedent-shattering performance of the 20th Air Force from March to August 1945, no United States soldier, sailor, or marine had to

land on bloody beachheads or fight through strongly prepared ground defenses to ensure victory in the Japanese home islands of Honshu, Kyushu, Hokkaido, and Shikoku. Very long-range air power gained victory, decisive and complete. (6:205)

Its concentrated strategic bombing campaign not only destroyed Japan's capacity to wage war but also undermined the will of its people to continue the war. Thus, Twentieth Air Force accomplished the strategic mission assigned to it by the Joint Chiefs of Staff.

Twentieth Air Force fulfilled its mission through the dedicated efforts of its very heavy bombardment (VHB) wings. The arrival of the 315th Bomb Wing (VH) in the spring of 1945 brought Twentieth Air Force up to full strength with more than 1,000 B-29s and 83,000 men. This large striking force conducted an around-the-clock bombing campaign against Japan, dropping a total of "165,000 tons of bombs and mines, plus 2 atomic bombs." (10:1) Approximately 90 percent of this tonnage was delivered during the final five months of the war and was the final blow that reduced Japan from an antagonistic world power to a vanquished enemy. The success of this campaign was made possible by the courage and untiring efforts of the members of Twentieth Air Force with each VHB making a notable contribution. The 315th's special assignment was the destruction of one type of target--the petroleum industry.

The 315th's strategic campaign against the Japanese oil industry was highly successful. The wing's bombing effort left 11 of Japan's newest refineries inoperable or completely destroyed. The 315th destroyed or badly damaged 5 percent of Japan's total square footage of oil industry buildings and knocked out 6,055,000 barrels of storage capacity.

Oil targets are reported as only 5 percent destroyed. However, due to the fact that most production was confined to a relatively few modern facilities, the 315th Wing, by concentrating on 11 of Japan's newest refineries, reduced overall output by 30 percent in little more than a month of operations. Synthetic production sagged even more sharply with a drop of 44 percent, which represents an actual loss of 265,000 barrels. (21:80)

Japan's petroleum industry had provided the life blood for its military machine, but its capability was decimated by the end of the war. As a result, Gen LeMay stated that he was "ready to switch the 315th to other targets" when the war ended. (53:--)

Although postwar analysis revealed the strategic effects of the 315th's oil industry campaign were more apparent than real, the operation was necessary. Since most of Japan's oil supplies

came in from overseas, the American blockade and mining operations had dried up the supply that might otherwise have been stored and struck by the 315th. Thus, by the time the 315th began its operations, many oil tanks were empty, and Japan's oil refining production had fallen to only 4 percent of capacity. (5:661) Nevertheless, Gen LeMay's decision to attack the oil industry was logical based on military intelligence estimates. Unfortunately, military intelligence on the state of Japan's economy relied on photo-reconnaissance efforts often hampered by Japan's cloudy weather. Thus, "In the absence of adequate intelligence on the actual state of Japan's war economy, the strategic bombing attacks served as a guarantee that the oil industry had been eliminated." (42:7) As a result, the 315th's attacks on the oil industry not only contributed to strategic bombing efforts, but it also provided an opportunity to test the wing's special radar capability.

The 315th proved the feasibility of all-weather, selective precision bombing. While the other VHB wings continued the area saturation bombing tactic, the 315th tried to show it was unnecessary to destroy an urban area just to hit a specific part of it. The wing's APQ-7 Eagle radar gave the definition and resolution required to pinpoint a target. Japan's oil refineries provided ideal test targets because they were relatively undamaged, well-defined, and located near the coastline. Although the oil targets were less than a mile square and frequently hidden by clouds, the 315th repeatedly hit the target using the APQ-7 synchronous radar bombing technique.

The operations of the 315th Wing showed conclusively that it was feasible to destroy targets by radar bombing when the target location is well known and the radar returns of the target itself are clear or its location relative to a prominent radar feature is well known. (7:65)

The 315th's remarkable performance revolutionized heavy bombardment by showing it was possible to destroy small, difficult targets without seeing them visually. "The 315th and the Eagle radar reaffirmed and assured the U.S. Air Force philosophy that 'we can sink a battleship' not only in daylight, but anytime regardless of visibility to the naked eye." (54:2)

The 315th Bomb Wing's Pacific campaign was relatively short but impressive. Between April and August 1945, the 315th transitioned from a "green" combat unit with no operational runway or aircraft to a B-29 unit carrying the heaviest payloads on the longest missions of the war. The wing flew 15 missions in 50 days between 26 June and 14 August. Of the 1,225 aircraft scheduled to participate, 1,200 planes became airborne and 1,114 (or 93 percent) bombed the primary target with 9,084 tons of bombs. (Appendix 15) The average bomb load increased from 14,631 pounds on the first mission to a record setting 20,648 pounds on

the 9 August strike against Amagasaki. The wing lost only four aircraft, or .33 percent of the 1,200 airborne planes, with 66 damaged. Unfortunately, 27 men were listed as killed or missing in action during the 15 Empire strikes. The 315th also flew five major POW supply missions, including a record setting 4,000-mile trip to camps in Mukden, Manchuria. In sum, "Twelve hundred sorties flown; nine thousand tons of HE bombs dropped; and four airplanes lost. Quite a record." (9:377) Several factors help to explain this outstanding performance.

Despite numerous adversities, the 315th's demanding and lengthy training program was a key element in its success. By the time the unit left for overseas, the men had received eight to ten months of intensive instruction. Throughout this period, the 315th had to surmount the manpower, supply, equipment, and facility shortages afflicting all units in the massive AAF B-29 program. The reorganized, streamlined air service groups were thoroughly trained to provide integrated combat support for B-29 operations. Although he did not have operational control over the groups during training, Gen Armstrong knew what it took to perform in combat and made it abundantly clear what training standards he expected the men to meet. Even though the Gypsy Task Force created immense logistical problems for the bomb groups, it provided an ideal, and crucial, training environment for the 315th. In the Caribbean, the bomb groups trained intensively to develop and perfect the revolutionary APQ-7 synchronous radar bombing technique. Due to unit reassignments in the Pacific, the 315th's operational date was delayed. "But the delay was used to good effect in terms of training. The training in radar bombing accuracy was particularly intense. As a result, the performance of the 315th with the AN/APQ-7 bombing system was spectacular." (7:62) This performance reflected Gen Armstrong's demand to have the 315th "go out the best trained Wing in the B-29 program." (38:Nov 44)

Leadership was another important factor in the success of the 315th Bomb Wing. Although each leader had his own style, they all led by example with Gen Armstrong setting the pace. He set high standards but never asked anyone to do anything he would not do. Gen Armstrong and his bomb group commanders were out in front on the tough missions, thus letting the crews know their leaders were supporting them on every mission. The air service group commanders led their men through the difficult, demoralizing reorganization period on Guam and established a well-organized and responsive wing service center. The 315th's leaders were also concerned about the welfare of their men and did everything they could to satisfy their needs. This was particularly difficult during the lengthy deployment and early days on Guam. The 315th's leaders embodied the high standards they set, earning them the respect and support of their men.

Finally, an intangible and dominant factor leading to the 315th's success in combat was the spirit and dedication of its

men. Despite the often unpleasant living conditions and long duty hours in the States and overseas, they met every challenge and worked together to complete the task at hand. Although the bomb groups and the air service groups trained separately, they united to form a potent combat unit. On Guam, they not only had to build their own base facilities, but they did it while readying the wing for the start of combat operations. The wing flew 15 combat missions in 50 days and achieved a remarkable record of bombing accuracy using new equipment and procedures. This is a tribute not only to the men who flew the Superforts, but also to those who ensured the planes and crews were ready to fly the long missions to strike Japan. There were many unsung heroes in the 315th's revolutionary air campaign against Japan, but every member's skill and sacrifice contributed to its success in combat. This is their story. "The Wings of Victory are yours. Wear them proudly." (16:1)

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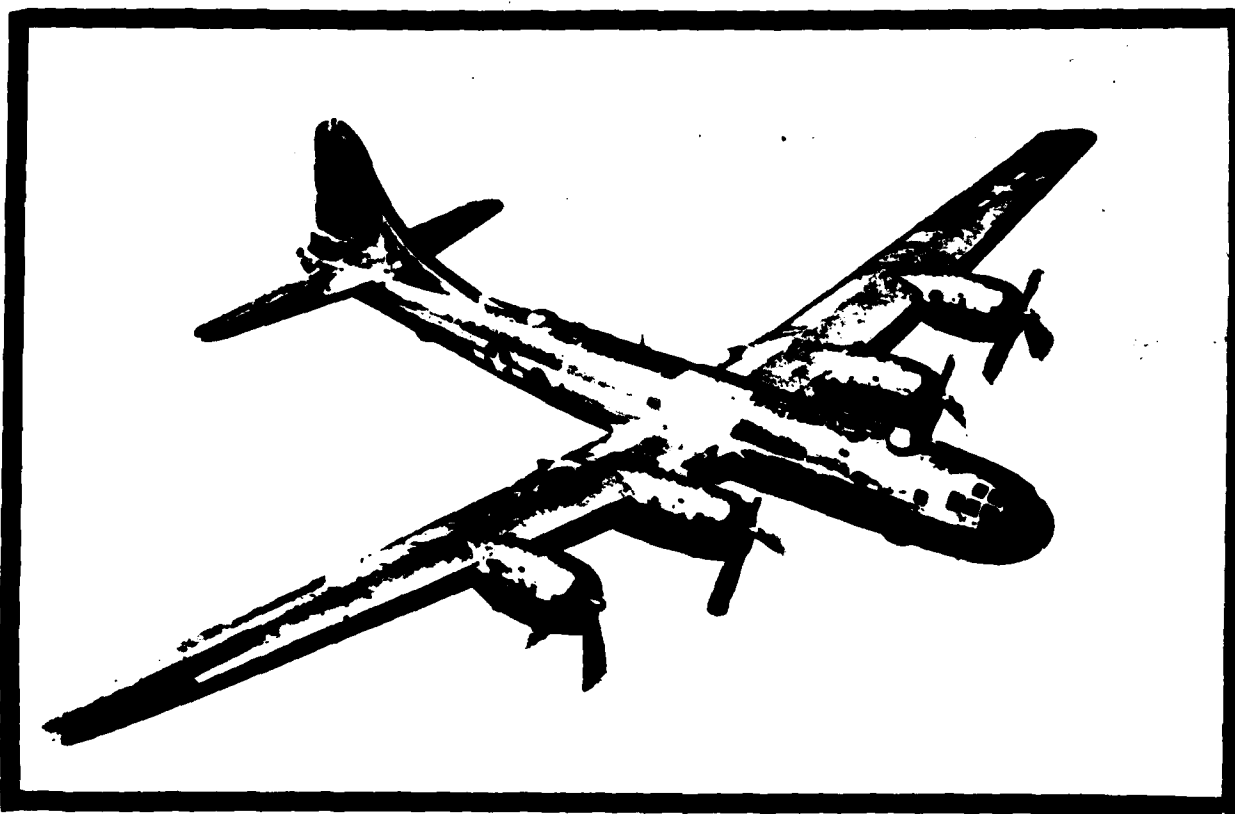
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THE BOEING B-29 SUPERFORTRESS

Test Specifications

Power Plants:	Four Wright R-3350 -23 18 cylinder air-cooled radial engines rated at 2200 horsepower each.
Armament:	Twelve .50 caliber machine guns in power turrets. One 20mm cannon in tail turret. Bomb loadings: 4—4000 lb bombs, or 8—2000 lb bombs, or 12—1000 lb bombs, or 40— 500 lb bombs, or 50— 300 lb bombs, or 80— 100 lb bombs.
Maximum speed	365 mph at 25000 ft.
Long Range Cruise	220 mph
Service ceiling	31850 ft.
Range—Max.	5830 miles
Weight, empty	69,610 lbs.
Weight, loaded	132,000 lbs.
Span	141 ft. 2 1/2 in.
Length	99 ft.
Radar	APQ-13 or APQ-7
Crew	Ten
Cost	\$639,188
Production	3863
Stripped version with AN/APQ-7 Radar bombsight was designated B-29B (315th Wing)	



WAR DEPARTMENT
The Adjutant General's Office
Washington 25, D. C.

AM 322 (30 Jun 44)
OB-I-AFRPG-M

7 July 1944

SUBJECT: Constitution and Activation of Headquarters and Headquarters Squadron, 315th Bombardment Wing, Very Heavy

To : Commanding General,
Second Air Force.

1. The Headquarters and Headquarters Squadron, 315th Bombardment Wing, Very Heavy, is constituted, assigned to your command, and will be activated at Peterson Field, Colorado Springs, Colorado, within ten (10) days after publication date of this letter.
2. This unit will be organized in accordance with T/O & E 1-160-1, 6 June 1944, with an authorized strength of forty-eight (48) officers, one (1) warrant officer and seventy-seven (77) enlisted men.
3. Cadres, fillers and replacements will be furnished from sources under your control with replacement accomplished in the usual manner by submission of AAF Forms 127-A and/or 127-B.
4. Priority rating for controlled items of equipment will be C-1-135.
5. Equipment will be in accordance with T/O & E 1-160-1, 6 June 1944. Automatic issue of equipment will not apply.
6. This unit is within the 1 April Revision of the 1944 Troop Basis.
7. The date of activation will be reported to this office by letter, and copies furnished the Service Commander concerned and the Engineer Central Stock Control Agency, Boatmen's Bank Building, 314 N. Broadway, St. Louis (2), Missouri.
8. Twenty (20) copies of the order issued by you pursuant to this letter will be forwarded without delay to the Commanding General, Army Air Forces (Attention: Publications Branch, Management Control, Administrative Services Division). No other Distribution will be made to offices of Headquarters, Army Air Forces.
9. Obligate the appropriate allotments published in Section II, Circular 245, AD, 1944, to the extent necessary.

By Order of the Secretary of War:

H. S. Kessinger
Adjutant General

A true certified copy.


George W. Wissen
Capt., A C
Historical Officer

Boeing
Flying Fortress School

CERTIFICATE
of
TECHNICAL AIRCRAFT TRAINING

This is to certify that

M/Sgt. Clarence M. Juett

has satisfactorily completed the United States Army Air Forces Factory Training Course conducted by the Boeing Aircraft Company at Seattle, Washington, under the direction of the United States Army Air Forces and is hereby presented with this Certificate of Graduation from the

Super Fortress Division

which recognizes his ability to accomplish service and maintenance operations on Boeing B-29 Airplanes in accordance with the Technical Orders issued by the United States Army Air Forces

Certificate issued

July 17, 1944

R. E. Couture
DIRECTOR OF INSTRUCTION



F. P. Johnson
PRESIDENT BOEING AIRCRAFT CO.
R. P. Johnson
ADMINISTRATOR

502nd Bomb Group
December 1944

COMBAT CREW GROUND TRAINING SCHEDULE (11 DECEMBER - 16 DECEMBER INCL.)

402nd SQUADRON 11 and 14 DEC. INCL.				411th SQUADRON 12 and 15 DEC. INCL.				430th SQUADRON 13 and 16 DEC. INCL.			
TIME	A. C.	PILOT	NAVIGATOR	BOB	F. E.	RADIO OP.	RADAR GNR.	CFC GNR.	AUTS. GNR.	ETS. GNR.	TAIL GNR.
0800 to 0900	Eng. Spec. Bldg. T-104 Room 2	Eng. Spec. Bldg T-104 Room 2	Radar Bldg T-101 Room 2	Bomb Spec. Bldg T-109 Room 1	Eng. Spec. Bldg T-104 Room 1	Comm Spec. Loran Bldg T-101 Room 7	Radar Bldg T-101 Room 2	Gun Spec. Bldg T-102 Room 1	Gun Spec. Bldg T-102 Room 1	Gun Spec. Bldg T-102 Room 1	Gun Spec. Bldg T-102 Room 1
0900 to 1000	Eng. Spec. Bldg T-104 Room 2	Eng. Spec. Bldg T-104 Room 2	Radar Bldg T-101 Room 2	Bomb Spec. Bldg T-109 Room 1	Eng. Spec. Bldg T-104 Room 1	Comm Spec. Loran Bldg T-101 Room 7	Radar Bldg T-101 Room 2	Gun Spec. Bldg T-102 Room 1	Gun Spec. Bldg T-102 Room 1	Gun Spec. Bldg T-102 Room 1	Gun Spec. Bldg T-102 Room 1
1000 to 1100	Eng. Spec. Bldg T-104 Room 2	Eng. Spec. Bldg T-104 Room 2	Radar Bldg T-101 Room 2	Bomb Spec. Bldg T-109 Room 1	Eng. Spec. Bldg T-104 Room 1	Comm Spec. Loran Bldg T-101 Room 7	Radar Bldg T-101 Room 2	Gun Spec. Bldg T-102 Room 1	Gun Spec. Bldg T-102 Room 1	Gun Spec. Bldg T-102 Room 1	Gun Spec. Bldg T-102 Room 1
1100 to 1200	Eng. Spec. Bldg T-104 Room 2	Eng. Spec. Bldg T-104 Room 2	Radar Bldg T-101 Room 2	Bomb Spec. Bldg T-109 Room 1	Eng. Spec. Bldg T-104 Room 1	Comm Spec. Loran Bldg T-101 Room 7	Radar Bldg T-101 Room 2	Gun Spec. Bldg T-102 Room 1	Gun Spec. Bldg T-102 Room 1	Gun Spec. Bldg T-102 Room 1	Gun Spec. Bldg T-102 Room 1
1300 to 1400	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114
1400 to 1500	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114
1500 to 1600	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114
1600 to 1700	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114	Synthetics Link Tr. Bldg T-114

SECOND AIR FORCE CREW PROGRESS CHART — FLYING TRAINING (VH) SPECIAL

ME CODE		AAB	COL. J.R. KANE	STAT COM	MAJ. W.G. BACON DR TNG	COL. J.N. PEYTON	GRP CO	500 CO	344 ST	GRP HQ
NAME AND COMMANDER		CREW NUMBER	FIRST PHASE		SECOND PHASE		THIRD PHASE		AAF TRNG STNDS	
			MISSIONS	HOURS	MISSIONS	HOURS	MISSIONS	HOURS	COMPLETION	PERCENT
			1-100%	1-100%	1-100%	1-100%	1-100%	1-100%	1-100%	1-100%
1	101	101	100	100	100	100	100	100	100	100
	102	102	100	100	100	100	100	100	100	100
	103	103	100	100	100	100	100	100	100	100
	104	104	100	100	100	100	100	100	100	100
	105	105	100	100	100	100	100	100	100	100
2	201	201	100	100	100	100	100	100	100	100
	202	202	100	100	100	100	100	100	100	100
	203	203	100	100	100	100	100	100	100	100
	204	204	100	100	100	100	100	100	100	100
	205	205	100	100	100	100	100	100	100	100
3	301	301	100	100	100	100	100	100	100	100
	302	302	100	100	100	100	100	100	100	100
	303	303	100	100	100	100	100	100	100	100
	304	304	100	100	100	100	100	100	100	100
	305	305	100	100	100	100	100	100	100	100
4	401	401	100	100	100	100	100	100	100	100
	402	402	100	100	100	100	100	100	100	100
	403	403	100	100	100	100	100	100	100	100
	404	404	100	100	100	100	100	100	100	100
	405	405	100	100	100	100	100	100	100	100
5	501	501	100	100	100	100	100	100	100	100
	502	502	100	100	100	100	100	100	100	100
	503	503	100	100	100	100	100	100	100	100
	504	504	100	100	100	100	100	100	100	100
	505	505	100	100	100	100	100	100	100	100
6	601	601	100	100	100	100	100	100	100	100
	602	602	100	100	100	100	100	100	100	100
	603	603	100	100	100	100	100	100	100	100
	604	604	100	100	100	100	100	100	100	100
	605	605	100	100	100	100	100	100	100	100
7	701	701	100	100	100	100	100	100	100	100
	702	702	100	100	100	100	100	100	100	100
	703	703	100	100	100	100	100	100	100	100
	704	704	100	100	100	100	100	100	100	100
	705	705	100	100	100	100	100	100	100	100
8	801	801	100	100	100	100	100	100	100	100
	802	802	100	100	100	100	100	100	100	100
	803	803	100	100	100	100	100	100	100	100
	804	804	100	100	100	100	100	100	100	100
	805	805	100	100	100	100	100	100	100	100
9	901	901	100	100	100	100	100	100	100	100
	902	902	100	100	100	100	100	100	100	100
	903	903	100	100	100	100	100	100	100	100
	904	904	100	100	100	100	100	100	100	100
	905	905	100	100	100	100	100	100	100	100
10	1001	1001	100	100	100	100	100	100	100	100
	1002	1002	100	100	100	100	100	100	100	100
	1003	1003	100	100	100	100	100	100	100	100
	1004	1004	100	100	100	100	100	100	100	100
	1005	1005	100	100	100	100	100	100	100	100
TOTAL EFFTS PER 100 %			100	100	100	100	100	100	100	100

HEADQUARTERS
315th Bombardment Wing (VII)
Peterson Field, Colorado Springs, Colorado

LK/rwb

231.23 GP

11 January, 1945

SUBJECT: Technical Representatives to Accompany 315th Bomb Wing Overseas.

TO : Commanding General, Second Air Force, Colorado Springs, Colorado.

1. Reference is made to telegram your Headquarters FG-3347 14 December 1944. Request is made for the following civilian technical representatives to accompany the units of this command overseas:

a. 315th Bomb Wing Headquarters

- (1) One representative Goodyear Tire and Rubber Company (fuel cell repairman)
- (2) One Bendix Pioneer accessories representative.

b. 16th Bomb Group

- (1) One representative Wright Aeronautical Corporation
- (2) One representative Boeing Aircraft Corporation.
- (3) One representative Minneapolis-Honeywell Regulator Company
- (4) One representative Western Electric Manufacturing Corporation.

c. 501st Bomb Group

- (1) One representative Wright Aeronautical Corporation
- (2) One representative Boeing Aircraft Corporation

231.23 GP
11 January 45,

(3) One representative Minneapolis Honeywell Regulator Corporation

(4) One representative Western Electric Manufacturing Corporation.

d. 502nd Bomb Group

(1) Mr. Earl Osborne, Wright Aeronautical Corporation

(2) Mr. James W. O'Brien, Boeing Aircraft Corporation

(3) Mr. W.F. Wrolson, Minneapolis-Honeywell Regulator Corporation

(4) One representative Western Electric Manufacturing Corporation.

e. 331st Bomb Group

(1) One representative Wright Aeronautical Corporation

(2) Mr. John M. Ludwa, Boeing Aircraft Corporation

(3) One representative Minneapolis-Honeywell Regulator Company

(4) One representative Western Electric Manufacturing Corporation.

f. 509th Bomb Group

(1) One representative Wright Aeronautical Corporation

(2) Mr. R.L. Davidson (now at Oklahoma City) Boeing Aircraft Corporation

(3) Mr. Vernice D. Mullins, Minneapolis-Honeywell Regulator Company

(4) One representative Douglas Aircraft Corporation (C-54)

(5) Mr. H.O. Harding, Western Electric Company (radar)

231.23 GP
11 January 45, Cont.

(6) One representative Curtis Electric
Propeller Company.

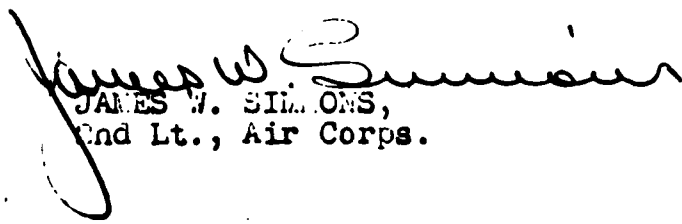
2. It is believed that the above list of representatives is a minimum requirement for efficient operation of these units in the theater of operations. In the event the individuals requested by name are not available for assignment overseas, it is requested that suitable trained replacements be substituted.

3. It is further requested that these representatives be assigned to duty with their respective groups at as early a date as is practicable in order that they may familiarize themselves with unit problems and that they may become acquainted with the personnel of the organization prior to movement overseas.

FOR THE COMMANDING GENERAL:

K.S. BROWN,
Major, A.C.
Adjutant.

A TRUE COPY:


JAMES W. SIMMONS,
2nd Lt., Air Corps.

WORK ORDER NO.

LEGEND

☐ CLEARING

☐ GRADING

☐ GRADED

☐ BASE COURSE

☐ PAVED

DATE

INSPECTOR

REMARKS

3330 Inland Aviation Boulevard

REVISED LATEST

NORTHWARD FILE

DATE



Published weekly by the Information & Education
Section, appearing every Thursday. This paper
may NOT be mailed off the Island 28 June 1945

365 mi. CHINA COAST FREED

PACIFIC WAR NEWS

During the night of 25-26 June a number of enemy aircraft appeared over the Okinawa area and dropped a few bombs which did no damage. Twelve enemy planes were shot down by our anti-aircraft guns and combat air patrols. The Tenth Army troops continued to mop up remnants of the enemy force on Okinawa on 26 June. A total of 9498 prisoners have been taken during the campaign, many of whom surrendered with leaflets scattered over the island by our forces... 20th Air Force Headquarters announced that a medium force of B-29s bombed industrial targets near Nagoya on the main Japanese island of Honshu 14 hours after a mammoth force had raided 10 objectives on the same island. The new attack (Ed.: the first in which our Group has participated) was carried out against Yokkaichi by the 21st Bomber Command aircraft based in the Marianas, the announcement said. Further details will be released when the returning crewmen's observations are reported and tallied.

TRUMAN PLEDGES QUICK RATIFICATION

Conference-weary delegates began their homeward journey today to the far corners of the globe, carrying with them the urgent appeal of President Harry S. Truman for the immediate ratification of the World Security Charter by the 50 United Nations. "There is a time for making plans- and there is a time for action," the President said in his address formally ending the United Nations Conference. "The time for action is now! Let us therefore, each in his own nation and according to its own way, seek immediate approval of this Charter- and make it a living thing." The President said he was sending the Charter to the US Senate at once for ratification action and he said he was certain that the overwhelming sentiment of the American people and of the Senate favored immediate approval.

Chinese troops have ripped 16 miles up China's 'invasion' coast toward Shanghai advancing within 165 miles south of the port in Nor. Today in pursuit of withdrawing Japs, the High Command said. Sweeping along the south shore of Taichow Bay 450 miles west of American-held Okinawa the Chinese have reached Linhai (Taichow) city area south of the great industrial region of Hangchow. With the new advance Japs have been cleared from a 365-mile stretch of China's vulnerable coast. In the last five weeks the Japs have abandoned 240 miles of coastline north from Foochow to Linhai. Chinese forces have captured Tapesong, 8 miles north of Liushow and another column is closing in on the former US air base site from the northwest.

DOCKERS BLAST HATE PLEDGERS

Secretary of the Interior, Harold L. Ickes tonight denounced pretended patriots who "with loyalty on their lips and malice in their hearts" are trying to "edge us into war with Russia." Yet, he said, America's "most insidious and dangerous enemies" even now are seeking to "stir up suspicion and moment fear and hate of Russia," "that great nation without whose cooperation there can be no peace... Everyone knows of the whisperings that are going on, whisperings that are designed to make us suspicious and nervous and therefore ready rashly to take a step that would really be a step- a long and irrevocable one over the brink of disasters." He said that this "terrible" frightful cost "ought to be a guarantee for peace and security."

KQIM V HGM NH60 ROUTINE [REDACTED]

FROM: BOMCOM XXI 111605Z

TO: COMAF 20

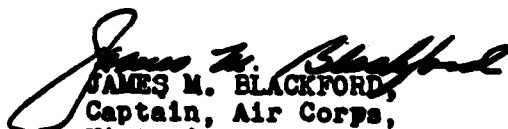
SUBJECT: PHOTO INTERPRETATION 3PR5N 336 FLOWN 11 JULY 1945

MEAN TIME OF PHOTOGRAPHY: 2320Z ALTITUDE: 30,000 FT.

TARGET 90.25 - 1764 MARUZEN OIL REFINERY: PHOTO RECONNAISSANCE
SHOWS THAT TARGET 1764 IS 95 PERCENT DESTROYED AS A RESULT OF XXI
BOM COM MISSION 255, 6-7 JULY 1945.

ALL OF THE BUILDINGS ON THE NORTH BANK OF THE RIVER ARE COMPLETELY
DESTROYED. OF THE REST OF THE PLANT, 5 LARGE TANKS, SEVERAL
SMALL TANKS, AND TWO BUILDINGS ARE LEFT UNDAMAGED. END

A CERTIFIED TRUE COPY:


JAMES M. BLACKFORD,
Captain, Air Corps,
Historical Officer.

L

WF V BC NR 5 ROUTINE [REDACTED]

FROM LEMAY COMBOMBOMCOM 21 124425Z
TO COMBOMBOM 315

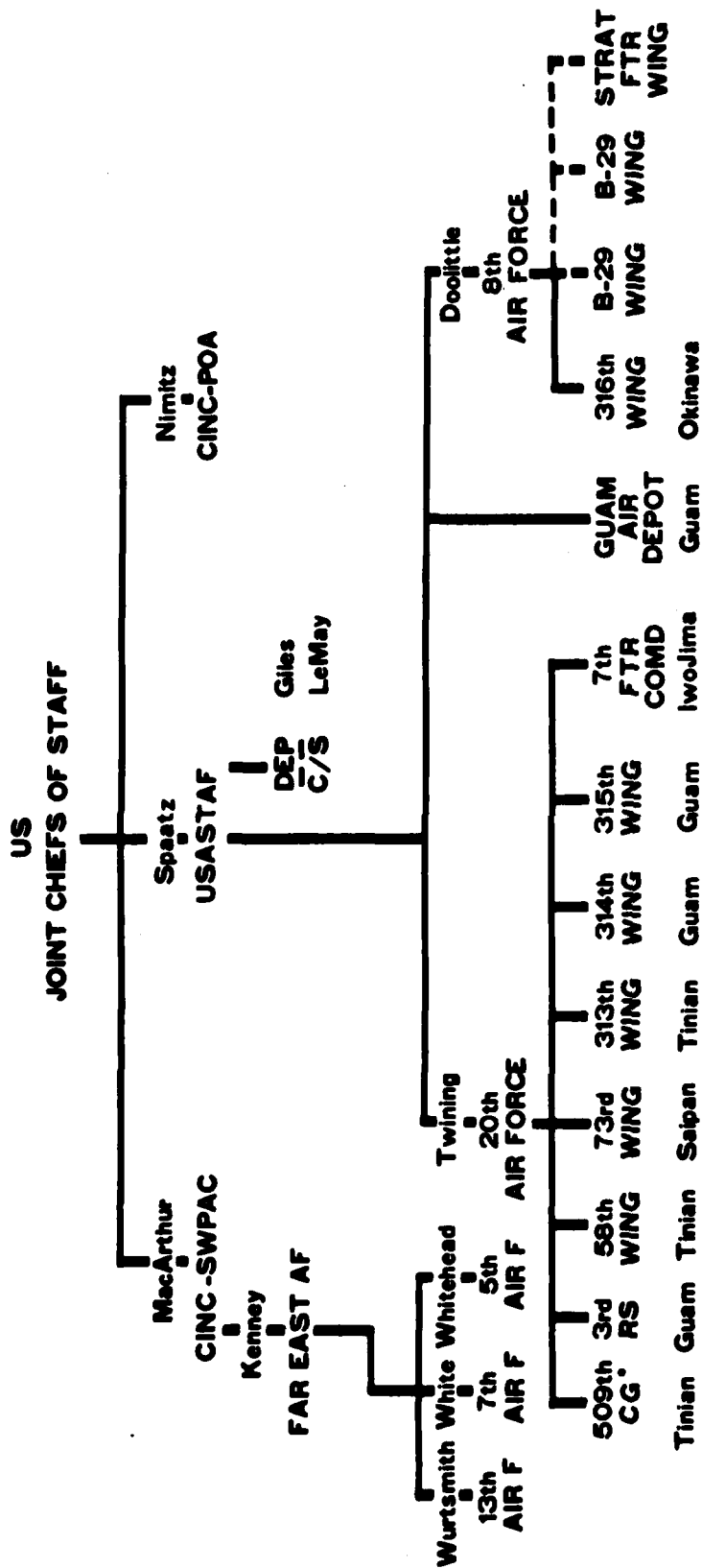
ALOPT 0937. SUCCESSFUL STRIKE IS SUBJECT PD ITEM HAVE JUST REVIEWED
THE POST STRIKE PHOTOGRAPHY OF YOUR STRIKE ON TARGET ONE SEVEN SIX
FOUR CMA THE MARUZEN OIL REFINERY AT SHIMOTSU CMA THE NIGHT OF SIX
SLANT SEVEN JULY PD WITH ABLE HALF WING EFFORT YOU ACHIEVED NINE
FIVE PERCENT DESTRUCTION CMA DEFINITELY ESTABLISHING THE ABILITY OF
YOUR CREWS WITH THE ABLE PETER QUEEN DASH SEVEN TO HIT AND DESTROY
PRECISION TARGETS CMA OPERATING INDIVIDUALLY AT NIGHT PD THIS
PERFORMANCE IS THE MOST SUCCESSFUL RADAR BOMBING OF THIS COMMAND
SO DATE PD CONGRATULATIONS TO YOU AND YOUR MEN

END...

TOC..0438Z DEL XX
R NR5 DO K
..

FIGURE 78 • PLOT PLAN - BOMB HITS • MARUZEN OIL COMPANY • WAKAYAMA

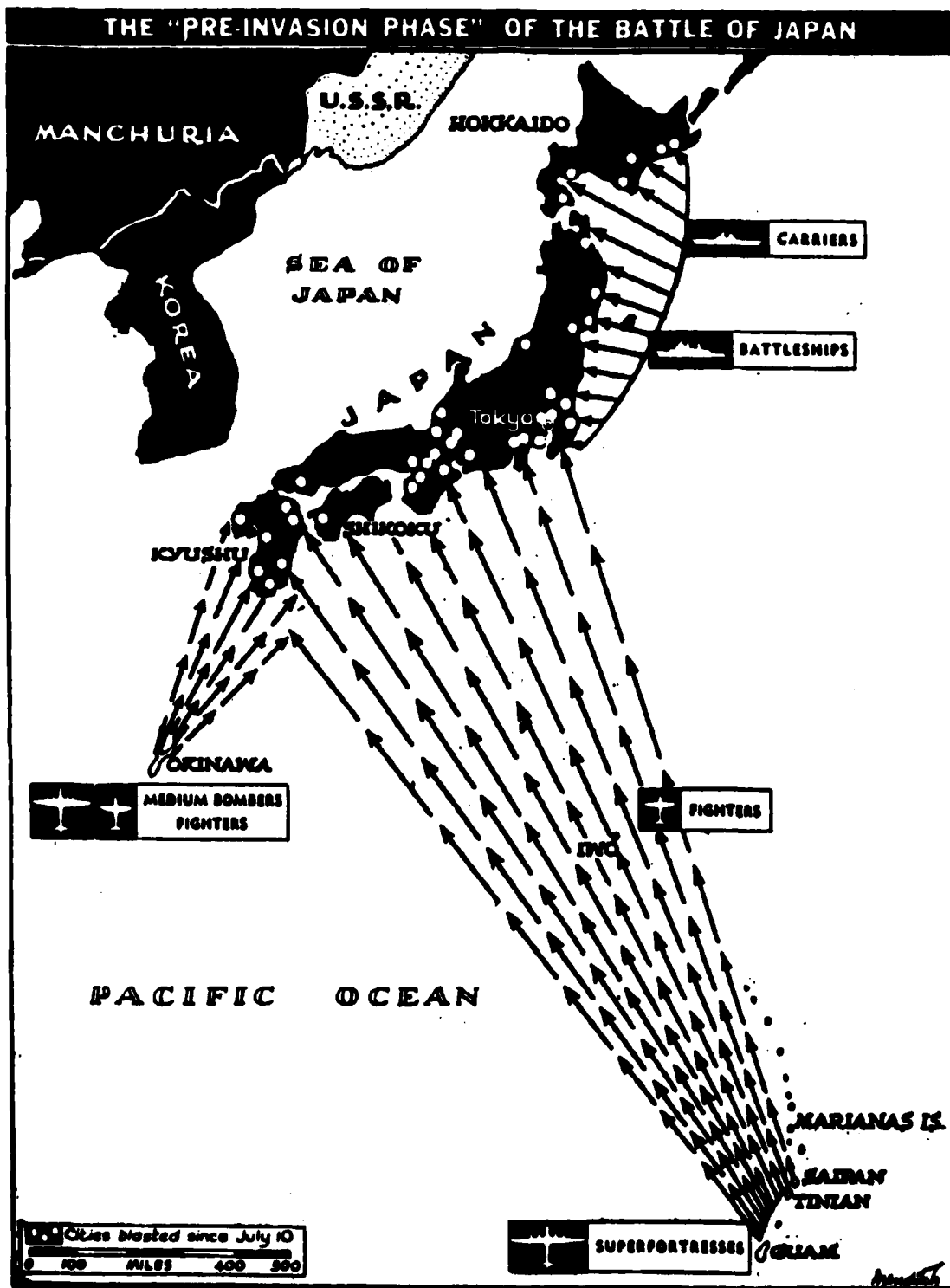




**US ARMY AIR FORCES IN THE PACIFIC
US ARMY STRATEGIC AIR FORCES IN THE PACIFIC**

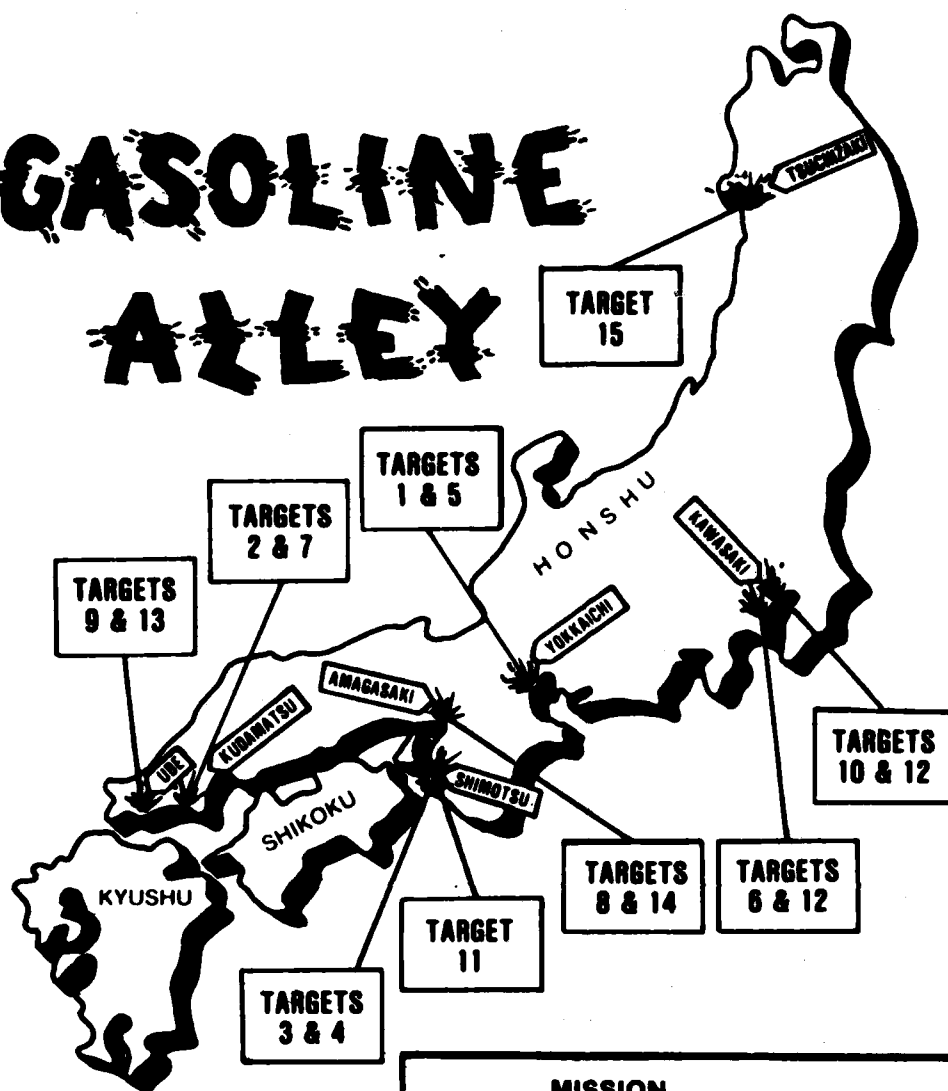
AS OF 15 August 1945

*509th Composite (Atomic) Group



August, 1945

GASOLINE ALLEY



DATE	MISSION NUMBER	TARGET
26/27 June	1	UTSUBE RIVER OIL Refinery, Yokkaichi
29/30 June	2	NIPPON Oil Co., Kudamatsu
2/3 July	3	MARUZEN Oil Refinery, Shimotsu
6/7 July	4	MARUZEN Oil Refinery, Shimotsu
9/10 July	5	UTSUBE RIVER Oil Refinery, Yokkaichi
12/13 July	6	KAWASAKI Petroleum Center
15/16 July	7	NIPPON Oil Co., Kudamatsu
19/20 July	8	NIPPON Oil Co., Amagasaki
22/23 July	9	UBE Oil Liquefaction Co.
25/26 July	10	MITSUBICHI Oil Refinery
28/29 July	11	NIPPON Oil Co., Shimotsu
1/2 August	12	KAWASAKI Petroleum Center
5/6 August	13	UBE Oil Liquefaction Co.
9/10 August	14	NIPPON Oil Co., Amagasaki
14/15 August	15	NIPPON Oil Co., Tsuchizaki

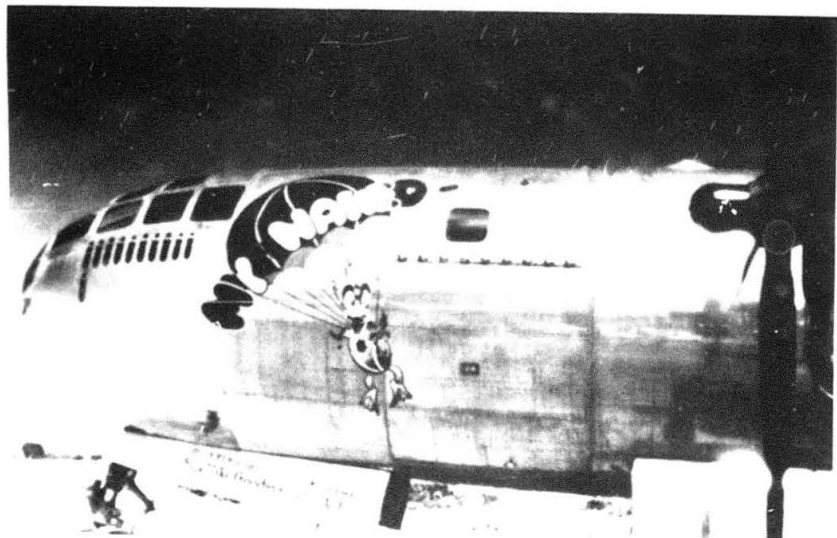
315TH BOMBARDMENT WING

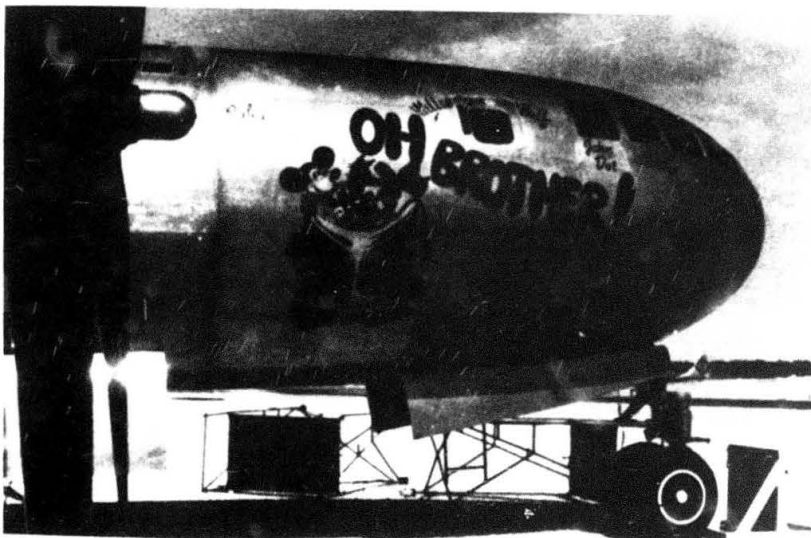
COMBAT MISSION STATISTICS

Mission No.	Date	Primary Target	Aircraft Scheduled	Aircraft Airborne	Bombed Primary	% of Airborne	Bomb Tonnage	Aircraft Lost	% of Airborne Lost
1	26 Jun	Utsube Oil Refinery	38	35	33	94	223	0	0
2	29 Jun	Nippon Oil Co.. Kudamatsu	39	36	32	89	209	0	0
3	2 Jul	Marusen Oil Refinery	41	40	39	98	297	0	0
4	6 Jul	Marusen Oil Refinery	60	60	59	98	442	0	0
5	9 Jul	Utsube Oil Refinery	65	64	61	95	469	1	1.6
6	12 Jul	Kawasaki Petroleum Center	71	62	55	89	452	2	3
7	15 Jul	Nippon Oil Co.. Kudamatsu	71	71	61	86	494	0	0
8	19 Jul	Nippon Oil Co.. Amagasaki	87	86	85	99	702	0	0
9	22 Jul	Ube Coal Liquefaction Co.	82	82	74	90	637	0	0
10	25 Jul	Hayama/Mitsubishi Refineries	82	85	77	91	668	1	1.2
11	28 Jul	Shimotsu Oil Refinery	87	84	78	93	658	0	0
12	1 Aug	Hayama/Mitsubishi Refineries	132	130	121	93	1025	0	0
13	5 Aug	Ube Coal Liquefaction Co.	113	113	108	96	938	0	0
14	9 Aug	Nippon Oil Co.. Amagasaki	112	109	97	89	918	0	0
15	14 Aug	Nippon Oil Co.. Tochizaki	145	143	134	94	954	0	0
Total:			1225	1200	1114	93	9086	4	.33

REPRESENTATIVE NOSE ART ON 315TH AIRCRAFT.







315TH WING COMMANDERS

Lt Philip Locke Jul 1944
Lt Col Robert A. Koerper Jul 1944
Lt Col Stanley A. Zidiales Aug 1944
Brig Gen Frank A. Armstrong, Jr. Nov 1944

BOMB GROUP COMMANDERS

16TH GROUP

Capt William W. Hosler, Jr. .. Jun 1944
Maj Richard W. Lavin Jul 1944
Col Samuel C. Gurney, Jr. Jul 1944
Lt Col Andre F. Castellotti .. Jul 1945

17TH GROUP

Maj Williard W. Wilson ... Jul 1944
Lt Col Hadley Saehlenou .. Jul 1944
Col Hoyt L. Prindle Aug 1944
Col James N. Peyton Jan 1945

501ST GROUP

Capt Harry L. Young Jun 1944
Lt Col Arch Campbell, Jr. Jul 1944
Col Boyd Hubbard, Jr. Aug 1944

502ND GROUP

Lt Col Estley R. Farley .. Jul 1944
Lt Col Robert C. McBride . Aug 1944
Col Kenneth O. Sanborn ... Oct 1944



AIR SERVICE GROUP COMMANDERS

24TH GROUP

Col Lee Fulton May 1944
Lt Col Charles H. Adams May 1945

23RD GROUP

Lt Col Francis M. Durfee . May 1944
Lt Col Carroll E. Case ... May 1945

25TH GROUP

Lt Col Ernest C. Muchmore ... May 1944
Lt Col Joe L. Neyer, Sr. Nov 1944

26TH GROUP

Lt Col Irving Blume Jun 1944